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LOS ANGELES STATE COLLEGE
OF APPLIED ARTS AND SCIENCES

VOLUME XIV SEPTEMBER 1960

CATALOG

FALL AND SPRING SEMESTERS
1960-61

SUMMER SESSION
1961

Address All Inquiries to:
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LOS ANGELES 32, CALIFORNIA

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COLLEGE CALENDAR

FALL SEMESTER 1960-61

August 15	Deadline for new students to apply for admission to the college for the fall semester.
September 1	Deadline for returning students to apply for admission to the college for the fall semester.
September 12-15	Advisement and registration week. Students should consult the Class Schedule for details, dates, and deadlines regarding registration.
1961 Graduates (Bachelors and Masters)	Final deadline for application for graduation in January 1961 is during the fall registration period. Final deadline for June graduation will be during the spring registration period. Final deadline for Summer Session candidates for graduation will be during the Summer Session registration period.
September 19	Instruction begins.
October 15	Deadline for filing credential application for Fall, 1960.
October 29	Last day to withdraw from class without risk of "F" grade.
November 10	Deadline for filing for directed teaching for Spring, 1961.
November 11	Veteran's Day (legal holiday). No classes in session.
November 18	Optional examination to meet American government and history graduation requirements.
November 24, 25, 26, inclusive	Thanksgiving holidays.
December 19, 1960, through January 1, 1961, incl.	Christmas holidays.
January 2	Classes resume.
January 5	Deadline for applications from new students for admission to the college for the spring semester.
January 7	Last day to withdraw from classes.
January 16-26, inclusive	Semester examinations.
January 27	Fall semester ends.

SPRING SEMESTER 1961

1961 Graduates (Bachelors and Masters)	Final deadline for application for graduation in January 1961 is during the fall registration period. Final deadline for June graduation will be during the spring registration period. Final deadline for Summer Session candidates for graduation will be during the Summer Session registration period.

January 5	Deadline for new students to apply for admission to the college for the spring semester.
January 15	Deadline for returning students to apply for admission to the college for the spring semester.
January 30 through February 2	Advisement and registration week. Students should consult the Class Schedule for details, dates, and deadlines regarding registration.
February 6	Instruction begins.
February 22	Washington's Birthday (legal holiday). No classes in session.
March 15	Deadline for filing credential application for Spring, 1961.
March 18	Last day to withdraw from class without risk of "F" grade.
March 27 through April 1	Easter vacation.
April 7	Deadline for filing for directed teaching for Fall, 1961.
April 21	Optional examination to meet American government and history graduation requirements.
May 13	Last day to withdraw from classes.
May 30	Memorial Day (legal holiday). No classes in session.
May 29 through June 9	Semester examinations.
June 9	Spring semester ends. Commencement.

SUMMER SESSION 1961

Summer Session Graduates	Final deadline for Summer Session candidates for graduation will be during the Summer Session registration period.
June 19	Registration for regular Summer Session only.
June 20	Instruction begins. Late registration.
July 3	Deadline for filing credential application for Summer Session.
July 4	Legal holiday. No classes in session.
July 28	Final Examinations. Summer Session ends.

POST SUMMER SESSION 1961

July 31	Post Session registration.
August 1	Post Session begins.
August 25	Post Session examinations. Post Session ends.

ADMINISTRATION

CALIFORNIA STATE DEPARTMENT OF EDUCATION

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J. Burton Vasche	Associate Superintendent of Public Instruction; Chief, Division of State Colleges and Teacher Education
Don R. Youngreen	Assistant Chief, Division of State Colleges and Teacher Education

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FACULTY 1960-1961

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B.A., 1944, M.A., 1945, Wayne University; Ph.D., 1953, University of Minnesota

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1957

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GENERAL INFORMATION

The Los Angeles State College was created by an act of the Legislature in 1947. Legislative action in 1949 reconstituted the college as the Los Angeles State College of Applied Arts and Sciences. It is one of 13 state colleges in California.

AIMS AND FUNCTIONS

The primary functions of the college include the preparation of teachers, the training of students in the applied arts and sciences to serve business and industry, the offering of a general and liberal education for responsible citizenship, and the preparation of students for advanced professional study.

ACCREDITATION

Los Angeles State College of Applied Arts and Sciences is accredited by the Western College Association and the California State Board of Education.

EXTENDED DAY PROGRAM

The extended day program is that part of the regular course offerings scheduled for the late afternoon, evening, and Saturday morning. The purpose of the extended day program is to provide mature persons with opportunities to do college-level work leading to advancement in business, education, or other professional fields. Credits earned in the extended day program may be applied toward the completion of degree or credential requirements, or the classes may be taken for cultural and intellectual improvement.

The courses offered in the extended day program are given on the same basis as the day classes, using the same facilities and textbooks, and meeting the same requirements as the day classes. In the majority of these classes the instructor is a member of the regular day faculty.

In many areas the graduation requirements may be completed by courses offered in the extended day program. However, certain classes required for teaching credentials are offered only in the day program. Students who plan to complete degree or credential requirements exclusively in the extended day program, therefore, should plan their programs in consultation with an adviser in their major field.

SUMMER SESSION

The college offers a six- and four-week summer session. The six weeks session begins approximately one week after the close of the spring semester. The four-week post session begins the following Monday after the close of the six-week session. Work may be taken toward the bachelor of arts, bachelor of science, master of arts, or master of science degrees, and all teaching credentials. Day and evening classes are scheduled. It is not necessary to file an application for admission to the summer session unless the student is working toward a degree or credential.

Many special features are included in the summer session that are not scheduled during the regular school year. These include workshops and seminars for teachers and for other occupational groups. An extensive program of recreational activities is arranged for summer session students. For details, write to the Dean of Summer Session, Los Angeles State College, 5151 State College Dr., Los Angeles 32, California.

EXTENSION SERVICE

The extension service is that part of the instructional program which provides off-campus classes in response to the expressed needs of organizations and groups within Los Angeles and nearby counties. The extension service also administers those courses given for extension credit via open-circuit television. The aim of the extension service is to meet more adequately the needs of the community by providing opportunities for the professional, cultural, and vocational betterment of individuals who cannot take college work in residence.

Extension courses are planned for those wishing to earn college credit and may, under certain conditions, be applied toward a degree or credential. Standard courses may be modified or special courses may be designed to meet the specific needs of the group. Courses may be started at any time and usually meet once a week for 15 weeks. A minimum of 20 students is required to establish an extension course.

Persons desiring detailed information regarding the organization of an extension course or current extension offerings should address inquiries to the Office of Extended Day Program and Extension Service, Los Angeles State College, 5151 State College Drive, Los Angeles 32, California.

NONCREDIT COURSES OR CONFERENCES

Los Angeles State College has a specific mandate to work closely with community, business, and labor organizations in meeting the educational needs of the metropolitan area. This responsibility is met in part through presentation of noncredit institutes, conferences, and courses. Such programs are generally set up in response to specific requests by organizations such as central labor councils, chambers of commerce, business or professional associations or large industrial firms. In some cases noncredit programs are offered to the public by the college without such a request, when a serious need has been found to exist.

All noncredit programs must be of collegiate level, and urgency of the need, existence of other means of meeting it, and the appropriateness of Los Angeles State College as the sponsoring institution are considered in deciding whether a program should be offered. Requests for information or help with particular educational problems which might be met through noncredit programs should be made to the Co-ordinator of Field Services.

WORK-STUDY PROGRAM

Work-study is a co-operative education program designed to integrate the student's classroom studies with related on-the-job experiences or with a secondary interest approved by the Work-Study Co-ordinator in consultation with the student's major adviser.

Over 150 employers in the Los Angeles metropolitan area have endorsed this program and approximately 250 students receive work-study credit each semester.

To qualify for work-study credit, the student is required to maintain a "C" average, or better; he must be matriculated and taking at least six units of course work, exclusive of work-study; and he must be properly enrolled in the work-study course, *Work-Study Assignments and Reports.* In addition, the student's employment must be approved by a Work-Study Counselor and the Work-Study Co-ordinator.

The credit allowed for work-study is on the basis of one unit for each eight hours of work per week with a maximum of two units of credit each semester. The upper division and lower division maximum is eight units each with a total of 16 units acceptable in the undergraduate program. The work-study units count as elective units in the student's major field. The student should check with his department to determine how many units are applicable in his program.

In addition to the on-the-job training, the student is required to have periodic conferences with his Work-Study Counselor and he is required to prepare periodic reports relative to his work experiences.

INTERNSHIPS IN PUBLIC SERVICE

This program of co-operative education combines classroom instruction with practical experience in government agencies and quasi-public enterprises. The regulations governing the operation of this program are similar to those of the work-study program, with the following variations:

1. Applicants for participation must be in senior standing.
2. Maximum number of units that may be earned and applied toward the bachelor's degree prior to registration in the college is eight.
3. In some instances a student must pass a qualifying civil service examination for admission to the internship.
4. Interested students should discuss opportunity and qualification details with the Co-ordinator of Training for Government Service.

ASSOCIATED CLINICS

The Associated Clinics of the college are designed as the center for the supervised clinical practice required for special education teaching credentials. The clinics are well equipped for practice in diagnostic and remedial services in speech, hearing, and reading.

STUDENT PERSONNEL SERVICES

The student personnel services of Los Angeles State College are centered in the Office of Admissions and Records, the Counseling and Testing Center, the Student Activities Office, the Placement Office, the Health Center, the Office of Veterans' Affairs, and the Office of Foreign Student Affairs. The student personnel program is under the general direction of the Dean of Student Personnel.

COUNSELING AND TESTING

Personal Counseling

The services of a professionally trained staff are available to any student who wishes help with educational, vocational, or personal problems.

Testing

The college provides facilities for administering standardized tests under the direction of the Test Officer.

Entrance tests are required of all new, matriculated students, all educational credential candidates, and all candidates for a master's degree.

Study habits inventories, scholastic aptitude and achievement tests, vocational interest inventories, and temperament tests are available to any student, with interpretation given by members of the counseling staff.

Foreign Student Affairs

A foreign students' adviser is available in the Counseling Center to assist foreign students who are in this country for the primary purpose of study. Their status as students is complicated by certain conditions established by federal law, by certain specific regulations and requirements of the college, and by certain provisos laid down by their particular governments. The student must comply with the various regulations to continue his studies in this country.

Veterans

The Los Angeles State College of Applied Arts and Sciences is approved for the training of veterans under Public Laws 190, 550, 610, 634, 894, and the California State Bill for Educational Assistance.

The Office of Veterans Affairs, located in Building M, Room 5, will assist veterans in filling out the correct forms for the Federal and State

Assistance Programs and in supplying information concerning Veterans Administration regulations and notifications.

Veterans who have had no prior training under the G. I. Bill are urged to request their letters of eligibility by submitting VA Form VB7-1990 at least two months before enrolling; and those who are transferring from another school should submit their transfer requests, VA Form VB7-1995 at least one month before enrolling.

To receive full-time subsistence on P. L. 550 the undergraduate student must carry 14 units, the graduate student 12 units; for ¾ subsistence the undergraduate minimum is 10 units, the graduate minimum 9 units; and for ½ subsistence 7 units is required for the undergraduate and 6 units for the graduate.

Veterans enrolling under the California State Bill need a new certificate for training every semester. To obtain subsistence under this bill, both undergraduate and graduate students must carry a minimum of 12 units with at least one day class.

Vocational Rehabilitation

The Vocational Rehabilitation Service of the State Department of Education offers assistance to students who have a physical or mental disability which constitutes a handicap to employment. Included for eligible students are vocational counseling, the payment of tuition and fees and, under certain circumstances, the provision of text books, subsistence and transportation funds, and various medical services. Details may be obtained from the Office of the Dean of Counseling and Testing.

Health Services

The college maintains a health center on the campus which is located in a building recently completed and centrally located. The center has facilities for medical examination of students who are registered at the college. Examinations are required of all teacher training candidates. The medical service staff is available to students for first aid treatment and for counseling of students with health problems.

Remedial Services

Assistance is available for students having difficulty in reading, writing, arithmetic, speech, and hearing. The *Class Schedule* lists the offices to be contacted by the student needing such help. These services are not college courses and there is no formal registration.

PLACEMENT OFFICE

Los Angeles State College Placement Service is an integral part of Student Personnel Services. Teacher placement and occupational placement comprise the main functions of this office.

The Placement Office helps the students appraise their strengths and weaknesses through counseling and meetings which provide positive job techniques. The avenues of information available to placement furnish the students with supply and demand data, prevailing business conditions, analysis of personnel requests such as subject combinations, geographic distributions of placement, and specific recommendations regarding curricular changes.

To the various divisions of the college, the Placement Office serves as a responsible liaison and source of information, keeping the departments alerted to company and teacher policies, programs, and recruitment needs.

Teacher Placement

Students and alumni who have completed their directed teaching under the supervision of Los Angeles State College are eligible to use the services of the Teacher Placement Office. Credential holders or credential candidates who have taken at least 12 units with the college and have a letter of reference from a faculty member in their major field may use the office as a repository for their confidential papers.

The placement folder is permanently retained. It will remain active for one year unless the candidate is employed during that time. Candidates may reactivate their papers at any time in the future by notifying the Placement Office and supplying current information to bring their files up-to-date.

A directory listing all school districts in the State is provided for student use. Descriptive materials, salary schedules, and applications from numerous school districts are available in the Teacher Placement Office.

There is no registration or service fee.

Occupational Placement

The college maintains an Occupational Placement Office to assist students and alumni in securing suitable permanent positions.

Lists of current openings are retained and opportunities are offered to students to meet with business representatives either on-campus or at the company offices. Constant contact is maintained wih business, industry, and government.

Seniors are urged to register early in their last semester in order that they may be referred to employers and to participate in on-campus interviews prior to graduation.

Students who are receiving a degree from Los Angeles State College are eligible for full-time placement. Alumni are always welcome to use the full-time placement facilities.

Part-Time Placement

Students who find it necessary to support themselves wholly or partly while attending college may receive assistance in finding employment through the Part-Time Placement Service. It is important to note that more students apply for work each semester than the Placement Service has jobs to fill. Because of this competition for work, a student may not find immediate employment or may be required to take work which he would not ordinarily prefer. Students are cautioned regarding heavy part-time work schedules. Those who plan to earn a large part of their expenses are advised to carry a reduced program of studies. In addition to part-time work, opportunities often exist for full-time temporary employment during the summer and other vacation periods.

STUDENT ACTIVITIES

Student Government

The Executive Council of the Associated Student Body is a policy forming organization for campus activities and organizations. The Cabinet of Commissioners represents the functional arm of the association, and is concerned with athletics, rallies, elections, notifications, homecomings, activities, publications, public relations, National Student Association, student finance, and convocations. Finances and business management are handled by a graduate manager and a budget commission.

All regular and limited students have the rights and privileges of membership in the Associated Student Body and its organizations. Women and men students who are members of the Associated Student Body are eligible for membership in the respective Associated Women Students or Associated Men Students organizations.

All students taking the major portion of their program in late afternoon or evening classes are members of the Extended Day Student Body. Their policy forming organization is the Extended Day Student Council. The council is responsible for the planning of monthly social, educational, and cultural events.

Student Organizations

Students may elect membership in any of the departmental, religious, or special interests groups. These, and other organizations, are chartered and co-ordinated by the Inter-Club Council.

The social fraternities and sororities are regulated by the Interfraternity and Panhellenic councils. Fraternity and sorority handbooks are available at registration and in the Student Activities Offices.

Student Publications

The *College Times* is the day student's newspaper published weekly by the Associated Students. The *Night Times* is the student newspaper published monthly for Extended Day students. The college yearbook is called the *Pitchfork*. *Statement* is a student literary publication which appears each semester. The *Student Handbook*, published by the Associated Students, serves as a source of information on student functions and student affairs. It includes a detailed description of the nature and objectives of the various organizations. The newspaper for the six weeks summer session is the *Summer Times*.

Scholarships

Descriptive material on scholarships available at Los Angeles State College may be obtained in the Office of the Dean of Student Personnel.

Loans

A limited number of short-term loans are available to assist students with expenses connected with registration. The college participates in the Federal Student Loan Program under the National Defense Education Act. Information about and applications for all loans are available in the Office of the Dean of Student Personnel.

Living Accommodations

There are no dormitories on the campus. Addresses of available living accommodations may be obtained through the Office of the Dean of Student Activities.

Athletics

The intercollegiate athletic program at Los Angeles State College is considered a phase of the physical education program. Participation is open to any full-time undergraduate student in good scholastic standing. Los Angeles State College has the opportunity to participate in regional and national competition through its membership in the National Collegiate Athletic Association, the National Association of Intercollegiate Athletics, and the California Collegiate Athletic Association. Every effort is made to send athletes and teams to participate in such competition when they have achieved outstanding records.

The college fields teams in 13 intercollegiate sports: football, basketball, track and field, baseball, swimming, water polo, cross country, wrestling, gymnastics, tennis, golf, fencing, and bowling. The coaches of the various sports are faculty members in the Division of Health, Physical Education, Recreation, and Athletics.

COLLEGE LIBRARY

The college library, which can accommodate over 1,300 students at one time, has a book collection containing 105,000 volumes. The books are shelved throughout the library by subject, and students and faculty have direct access to all library materials. The subject rooms are language arts, fine arts, social sciences, science and technology, and education. Each of these subject rooms has a pamphlet collection and many of them have other collections, as appropriate. The education room has almost 5,000 California state textbooks and 2,600 units of work and courses of study selected especially for those studying to become teachers. The fine arts room contains a collection of art reproductions, and the social sciences room a file of annual reports of business and other institutions.

Service to lower division students is concentrated on the first and second floors where there are available the general reference room, the Limited Loan collection, and the periodicals room. More than 1,200 periodicals and newspapers and 80 indexing and abstracting services are received currently. The bound volumes of periodicals total 16,000. Microtext reading facilities are provided and the library has a complete file of the *New York Times* on microfilm. The general reference room contains encyclopedias, dictionaries, and other materials, including a collection of 1,500 college catalogs.

Students are actively assisted in the use of library facilities by 34 librarians, 25 library assistants, and over 50 part-time student assistants. The library's hours of service are:

Monday through Thursday, 7:45 a.m. to 10 p.m.
Friday, 7:45 a.m. to 8 p.m.
Saturday, 9 a.m. to 1 p.m.

Changes in these hours and special schedules for holidays are posted in the library.

The library is an official depository for United States government publications and maintains files of important California state and municipal documents. The Perry R. Long Memorial Collection on Printing and Engraving contains almost 2,000 items. Also housed in the library is the International Communications collection. Books not obtainable in the Los Angeles area can be borrowed on interlibrary loan through the General Reference Department.

Other special facilities include typing rooms, group study rooms, and a browsing area, where a collection of paperbound books invites recreational reading.

ADMISSION AND REGISTRATION

Admission standards at Los Angeles State College are in accordance with policies stated in the California Administrative Code, Title 5, Education, which provides uniform admission regulations for all California state colleges. The scholarship requirements outlined in this catalog are in accordance with those code provisions which are applicable to Los Angeles State College.

MATRICULATION

Los Angeles State College no longer permits nonmatriculated students to enroll in classes in the fall and spring semesters. All students must matriculate by establishing eligibility for admission in accordance with procedures outlined below.

APPLICATION FOR ADMISSION

The following procedures and requirements apply to undergraduate students, defined as students not having a baccalaureate degree. Application procedures and admission requirements for graduate students (holders of a baccalaureate degree) are listed on page 60 of this catalog.

New Students: Students registering at Los Angeles State College for the first time must file an application with the Office of Admissions and Records on the form provided for that purpose. New students must request *two* copies of their transcripts from each school attended and have them sent directly from the school to the Office of Admissions and Records. *Transcripts are not accepted from students.* Students who have not completed at least 24 units of acceptable college work must also request *two* copies of their *high school* records.

The deadlines for filing new applications are:

August 15 for the fall semester
January 5 for the spring semester

Returning Students: Students planning to return to Los Angeles State College after an absence of one or more semesters must file an Application for Readmission. All such students must have *two* copies of their transcripts for all college work taken since last attending Los Angeles State College sent to the Office of Admissions and Records.

The deadlines for filing Applications for Readmission are:

September 1 for the fall semester
January 15 for the spring semester

Continuing Students: Students who maintain continuous attendance from one semester to the next (excluding summer session) need not file an application for each succeeding semester, *except that continuing students who have been in attendance as nonmatriculated students* *must file an application for admission as new students for the fall semester, 1960.*

ADMISSION OF HIGH SCHOOL GRADUATES

An applicant for admission as a freshman must qualify under one of the following provisions:

1. Have completed the equivalent of 7 Carnegie units (14 courses, other than physical education and military science, of one semester each, meeting five periods per week) with grades of A or B on a five-point scale. These courses must have been completed during the last three years of high school.
2. Have completed the equivalent of 5 Carnegie units (10 courses, other than physical education and military science, of one semester each, meeting five periods per week) with grades of A or B on a five-point scale. The applicant must have completed these courses during the last three years of high school. In addition he must have attained the 20th percentile or higher on the national norm of the college aptitude test given by this college.

Students preparing to enter the college are urged to consult their high school advisers and plan a program in high school that will prepare them adequately to pursue their chosen major at the college level. The following high school courses are recommended as preparation for any college course leading to the bachelor's degree:

> English, 3 years; algebra, 1 year; geometry, 1 year; one foreign language, 2 years; American history and civics, 1 year; additional social science, 1 year; chemistry, physics, physiology, or biology, 1 year. Typing is a recommended elective.

Students preparing to enter the fields of natural science and engineering should include additional courses for specific majors. The following courses are recommended:

> Chemistry and physics, 1 year credit in each field; advanced algebra, 1 year; trigonometry and solid geometry, 1 year. Recommended electives: Slide rule, mechanical drawing.

ADMISSION OF NON-HIGH SCHOOL GRADUATES

A person 21 years of age or older who is not a high school graduate may be admitted with adult special status by special action. In such cases, the applicant's test scores and experience are evaluated for evidence of ability to do college work.

ADMISSION WITH ADVANCED STANDING

Students who transfer from accredited degree-granting colleges and universities must have earned a grade-point average of C or better on the total program attempted and have been in good standing at the last institution attended. Students who transfer from a junior college must *also* have met the requirements for Admission of High School Graduates (see page 47) *or* have since completed 24 or more semester units of college work.

While no specific course pattern is required for admission, students attending other institutions in preparation for transfer to Los Angeles State College should select courses to satisfy General Education requirements (see pages 53-54) and preparatory courses as required in the proposed major field.

Junior College Credit: No unit credit will be allowed for course work taken at a junior college after the student has earned 64 units of junior college or college credit. No upper division credit can be allowed for courses taken in a junior college. No credit may be allowed for professional education courses taken in a junior college.

Credit for Extension and Correspondence Courses: The maximum amount of credit through correspondence courses and extension courses which may be allowed toward the bachelor's degree is 24 units, not more than 12 of which may be transferred from another college or university. Extension course credit does not apply toward the residence requirements at Los Angeles State College.

Credit for Military Service: The college allows undergraduate credit for service in the various branches of the United States Armed Forces in accordance with the recommendations of the American Council on Education. In order to apply for such credit, the student must file with the Office of Admissions and Records a photostatic copy of his honorable discharge. This should be done at the time application for admission is made. Additional credit may be granted for the completion of certain service school work upon presentation of photostatic copies verifying that such work has been completed satisfactorily.

Evaluation of Transfer Credit: The Office of Admissions and Records will evaluate previous college work in terms of its relationship to the requirements of Los Angeles State College. Every effort will be made to provide all new transfer students with this evaluation referred to as "Credit Summary" before the end of their first semester's attendance. A copy of the credit summary will be mailed to the student showing those courses that have been accepted on transfer and those courses that are yet to be taken to fulfill the general education requirements of the college. It will be the student's responsibility to consult with his departmental adviser to plan a program of study.

ADMISSION TO GRADUATE STANDING

Requirements for admission to graduate standing and the requirements for advancement to candidacy for the master's degree are described on page 60.

ADMISSION TO TEACHING CREDENTIAL PROGRAMS

Admission to the college as a regular student does not constitute admission to the teaching credential program. Students who intend to work toward credentials must obtain advisement from the Education Division during their first semester of attendance, following the procedure outlined in the section of this catalog dealing with that subject. See pages 132-135.

ADMISSION OF STUDENTS FROM FOREIGN COUNTRIES

International students seeking admission to the United States on the basis of acceptance by this college must fill out a special application available from the Office of Admissions and Records.

CANCELLATION OF ADMISSION

A student who is admitted to the college for a given semester but who does not register at the specified time will have his admission cancelled. If he applies later he must meet the current rules for admission.

REGISTRATION

At the time of registration, every student is required to file with the Office of Admissions and Records an official study list indicating all the courses for which the student is registered.

The filing of a study list by the student and its acceptance by the college is evidence of an obligation on the part of the student to perform the designated work to the best of his ability. Withdrawal from, or neglect of, any course entered on the study list, or a change of program, including a change of section of the same course, without formal permission from the Office of Admissions and Records, makes the student liable for a grade of "F" in the course.

A student may not receive credit in any course in which he is not officially registered. The dates for the registration period and instructions for registration are published each semester in the *Class Schedule.*

Study Load

The maximum study load recommended by the college is 16 units. However, upon approval of the faculty adviser, a student may enroll for as many as 18 units. This approval must be in writing and on a special form procured from the adviser. Such approval will not normally be given unless the student's previous scholastic record warrants such action. The only exception to the 16-unit maximum is that a student may register for one additional unit above the 16-unit maximum if the course is one of the following activity courses: Journalism 391-394 WXYZ; Music 320-321 WXYZ, 325-326 WXYZ, 425 WXYZ; Physical Education 150-155, 200-211, 251-254, 351-354. Graduate students who are candidates for the master's degree may carry a maximum of 16 units per semester toward their degree requirements.

Auditors

A properly qualified student may apply for admission to attend classes as an auditor. The student must meet the regular college entrance requirements and must pay the same fees as other students. An auditor may not change his registration to obtain credit after the last date to add courses to the study list, nor can he change from credit to audit after the sixth week of instruction.

Registration in Graduate Courses

An undergraduate student is not permitted to enroll in graduate level courses (those numbered 500-599) except under provisions outlined on pages 60-65. Graduate courses carry no credit toward a bachelor's degree.

Dual Registration

A student may not be registered in Los Angeles State College and also in another institution simultaneously without prior written permission from the Office of Admissions and Records.

Late Registration

Students who are unable to register during the regular registration period and who have approval from the Office of Admissions and Records may register late. Late registrants are severely handicapped in arranging their programs and must pay a five dollar ($5) late registration fee. The last day to register each semester will be announced in the *Class Schedule.*

Adding Courses

Any addition including a change of sections of the same course must be processed on the official change-of-program form obtained at the Office of Admissions and Records. Such changes may be made only during the dates indicated in the *Class Schedule.*

Withdrawal From Courses

If a student officially withdraws from a course during the first six (6) weeks of a semester, a grade of "W" will be recorded. If he withdraws during the sixth to the fourteenth week either a "WP" or a "WF" will be recorded, depending on whether or not he has the approval of the instructor and is doing at least "C" level work at the time of official withdrawal. No withdrawal is permitted after the fourteenth week. Unofficial withdrawal from a class is indicated on the student's permanent record with the letters "UW."

Selective Service Regulation

In order to qualify for a deferment or postponement of military service under selective service procedures, a student must be registered for 15 or more units and must remain in continuous attendance during regular sessions. The college serves as a reporting agency only, and any decisions affecting the student's selective service status will be made by the local board. Certification of registration and attendance to the selective service boards is sent only upon the student's request.

Course Numbering System

1– 99	Remedial courses.
100–299	Lower division courses of freshman and sophomore level.
300–399	Upper division courses of junior and senior level which do *not* give graduate credit.
400–499	Upper division courses of junior and senior level which give graduate credit *for graduate students.*
500–599	Graduate courses for graduate students only.

The letters A, B, C, or D following the course number, indicate a two-, three-, or four-semester course sequence in which A must be completed before B, and B before C.

The letters W, X, Y, Z, following the course number, indicate a course which may be repeated a specified number of times. Thus, YZ courses may be taken twice, XYZ courses three times, and WXYZ courses four times.

Advisement

Every student should make an appointment with a departmental adviser in the field of his major to plan his first semester's study program. The student should bring a copy of his transcripts for his adviser. When the Credit Summary (see page 48) has been received from the Office of Admissions and Records the student should make an appointment with his adviser to plan his complete program of study for the degree. This plan will be used as a basis for evaluating the student's eligibility to graduate and receive the degree. Changes in this program of study should be made only with the express approval of the student's adviser. It is recommended that the student make an appointment to see his adviser sometime before registration each semester.

SCHEDULE OF FEES

The regular fees of the college are given below. The fees for auditors are the same as for those receiving credit for a course. Personal checks will not be accepted in payment of college fees. Payment may be made in cash, money order or bank draft.

Registration Fees

(Payable at time of registration)

		Total
Over 6 units		
Materials and service	$33.00	
Student activity	9.00	$42.00
6 units or less		
Materials and service	17.00	
Student activity	5.00	22.00
Nonresident tuition * (in addition to above fees)		
15 units or more		$127.50
Less than 15 units, per unit		8.50

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* Foreign visa students must pay nonresident tuition during their entire period of attendance at Los Angeles State College.

Other Fees or Charges

(Payable when service is rendered)

Summer Session, per unit	$10.00
Extension, per unit	8.50
Late registration	5.00
Change of program	1.00
Transcript of records (after first copy)	1.00
Diploma fee (not a State fee)	3.00
Library books or materials overdue, damaged or lost (consult the library for schedule of fees)	
Studio music lessons per lesson per student	1.00 to 6.00
Failure to meet administratively required appointment or time limit	2.00
Replacement of laboratory equipment lost or broken	Cost

NOTE: Fees are subject to change upon approval by the State Director of Education.

Nonresident Student Fees *

Admission requirements for nonresident students are the same as those for all other applicants and are shown on the succeeding pages. A nonresident tuition fee is payable by all regular and limited students who have not been legal residents of the State of California for one year immediately preceding date of enrollment. This fee amounts to $8.50 per unit, to a maximum of $127.50 per semester.

Refund Regulations

Written application for refund of fees must be made to the College Business Office, within time limits prescribed by the State Administrative Code. Application forms and information concerning refunds are available at the Business Office. Early application is important since delay may reduce the amount of the refund received.

Veterans, except those under Public Law 550, receiving a letter of eligibility from the state or federal veterans authorities are entitled to a full refund of registration fees if eligibility commences from the first day of instruction. If eligibility commences after the first day of instruction a prorata refund will be made.

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* Foreign visa students must pay nonresident tuition during their entire period of attendance at Los Angeles State College.

CURRICULA OFFERED

BACHELOR'S DEGREE CURRICULA

The Los Angeles State College offers three types of bachelor's degree: bachelor of arts (B.A.), bachelor of science (B.S.), and bachelor of vocational education (B.V.E.).

Bachelor of Arts Degree. The bachelor of arts degree is offered with majors in: American Studies; Art; Biological Science; Botany; Business Education; Chemistry; Economics; Education (Elementary Education, Kindergarten-Primary Education, Junior High Education, and Special Education-Deaf); English; Geography; Government (with options in General Government, Government Service, International Relations, and Pre-Law); History; Home Economics; Homemaking; Home Economics in Business; Industrial Arts; Journalism; Language Arts; Mathematics; Microbiology; Music; Physical Education; Physical Science; Physics; Psychology; Social Science; Social Studies; Sociology (with options in General Sociology and Social Welfare); Spanish; Speech and Drama; Speech and Hearing Correction; Zoology.

Bachelor of Science Degree. The bachelor of science degree is offered with majors in: Business Administration (with options in Accounting; Business Arts; Business Economics and Statistics; Finance; Management; Marketing and Merchandising; Office Administration; Special Business; Transportation and Foreign Trade); Chemistry; Engineering; Geology; Mathematics; Medical Technology; Nursing; Physics; Police Science and Administration; Printing Management; Recreation Education.

Bachelor of Vocational Education Degree. The bachelor of vocational education degree is offered for those vocational teachers recommended by the California State Board of Examiners for Vocational Teachers. Vocational teachers interested in details regarding this program should see the Chairman of the Division of Technical Sciences.

GENERAL REQUIREMENTS FOR BACHELOR'S DEGREE

General Education Requirement

General education is nonspecialized education taken by all students, regardless of the type of bachelor's degree or the major field selected.

A liberal education encourages the student to enjoy cultural and intellectual freedom. Such freedom may result if the student learns to communicate effectively; to understand some of the basic principles of the natural world about him; to grasp the significance of man's endeavor to understand himself and his relationship to others, to his past, and to his physical environment; to appreciate beauty in many forms; to recognize the values, ideas, and assumptions that give meaning to his existence.

The faculty of Los Angeles State College has developed a general education program designed to form the minimum core of each student's liberal education. To increase the likelihood that the experiences provided in this program will result in increased cultural and intellectual freedom for the student, each general education course has these characteristics:

(1) It makes explicit the method or process of the discipline it represents.
(2) It makes explicit the relationships that exist between its fields of inquiry and other fields of inquiry.
(3) It assists the student to apply to and gain from the everyday experiences that surround him the insights obtained from a study of materials which may be somewhat further removed in time and distance.

In addition, courses are required in physical education designed to teach the student skills in a variety of physical recreational activities.

Each candidate for the baccalaureate degree must satisfy either through courses accepted by the Office of Admissions and Records upon transfer or through the specifically designated courses at Los Angeles State College a minimum of 45 units distributed in the following pattern:

I. Social Sciences .... 9 units minimum
  A. Required courses
    Government 150—Government and American Society (3)
    History 250—United States History (3)
    and *one* of the following
    Anthropology 250—Cultural Anthropology (3)
    Geography 150—Human Geography (3)
    Economics 150—Economics for the Citizen (3)
    Sociology 250—Man and Society (3)
  B. Elective courses
    Any of the courses not taken as a part of the minimum requirements listed under "A" above and History 450—Senior Colloquium in History (3)

II. Natural Sciences .... 9 units minimum
  A. Required courses
    Biological Science 153—Principles of Biology I (3)
    Physical Science 151—Principles of Physical Science I (3)
    Biological Science 154—Principles of Biology II (3)
    or
    Physical Science 152—Principles of Physical Science II (3)
  B. Elective courses
    Biological Science 154—Principles of Biology II (3)
    or
    Physical Science 152—Principles of Physical Science II (3)
    (Whichever was not taken as a part of minimum requirements listed under "A" above.)
    Conservation 354—Conservation of Natural Resources (3)
    Mathematics 353—Mathematics for General Education (3)
    Nature Study 355—Natural Science and California Culture (3)

III. The Humanities .... 9 units

A. Required courses
  - Art 150—Art, Music, and Dance I (3)
  - Philosophy 150—Philosophical Ideas (3)
  - English 250—Understanding Literature (3)

IV. Communication .... 6 units minimum

A. Required courses. This requirement may be met by one of two alternative routes:

1. A year course sequence.
   - Language Arts 150AB—Written and Oral Communication (3-3)

or

2. Two single semester courses.
   - English 150—Written Expression (3)
   - Speech 150—Oral Expression (3)

Note: English 150 and Speech 150 may be taken in either order; Language Arts 150A must be taken before Language Arts 150B. Language Arts 150A *or* B may not be combined with English 150 or Speech 150.

B. Elective courses.
  - Philosophy 350—Logic (3)
  - Spanish 150—Basic Patterns in Spanish (3)
  - French 150—Basic Patterns in French (3)
  - German 150—Basic Patterns in German (3)
  - Russian 150—Basic Patterns in Russian (3)

V. Personal and Social Fitness .... 7 units minimum

A. All courses required.
  - Psychology 150—Human Behavior (3)
  - Health and Safety 350—Personal Health (2)
  - Physical Education 150—Fundamentals of Physical Education (1)
  - Physical Education Activities (Courses numbered 151-154, 251-254, and 351-354) (1)

B. Elective courses.

Any Physical Education general education activities courses not taken as a part of the minimum requirements listed under "A" above. MAXIMUM: TWO ADDITIONAL UNITS.

The student who takes only the minimal number of courses in each of the five fields will have accumulated 40 units. He will then complete his 45 units by selecting 5 or more units from among any of the remaining general education elective courses.

Students choosing to major or minor in certain subjects, notably the sciences and engineering, will in the course of completing the requirements for their major or minor, meet the objectives of certain of the general education courses. For this reason exceptions are made to the general education requirements as follows:

Curriculum	*Courses not required*
Biological science teaching major	Biological Science 153, 154, and Physical Science 151
Biological science teaching minor	Biological Science 153, 154, and Physical Science 151

Curriculum	*Courses not required*
Botany Major	Biological Science 153, 154, and Physical Science 151
Business Education Major	One General Education elective (Economics 150)
Chemistry major	Physical Science 151, 152
Engineering major	Physical Science 151, 152; and two General Education electives
Geology major	Physical Science 151, 152
Government major	Government 150 [‡]
Health education minor	Health and Safety 350 [‡]
History major	History 250 [‡]
Medical technology major	Biological Science 153, 154, and Physical Science 151
Microbiology major	Biological Science 153, 154, and Physical Science 151
Nursing major	Health & Safety 350, Biological Science 153, Physical Science 152
Physical education major	Physical Education 150 and Physical Education Activities.[*]
Physical science teaching major	Physical Science 151, 152, and Biological Science 153
Physical science teaching minor	[†]Physical Science 151, 152, and Biological Science 153
Physics major	Physical Science 151, 152
Psychology major	Psychology 150 [‡]
Social Studies major	History 250 [‡]
Zoology major	Physical Science 151, and Biological Science 153, 154

Major Department Requirements

Each student must complete the requirements outlined by the department of his selected major field. Requirements for the various departmental majors are listed in the appropriate sections of this bulletin.

Total Unit Requirement

The bachelor of arts and the bachelor of vocational education degrees require completion of 124 units. The bachelor of science degree requires 124-132 units, depending upon the major field selected. At least 40 units must be in courses carrying upper division credit.

Scholarship Requirement

The student must earn at least a 2.0 grade point average in all college work attempted.

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[*] Physical education majors and minors are required to take one additional general education elective course.

[†] See footnote page 302.

[‡] Students in these curriculums must take elective general education courses to fulfill the required 45 units.

Residence Requirement

For the bachelor of arts, bachelor of science, and bachelor of vocaional education degrees a minimum of 24 semester units shall be earned n residence at Los Angeles State College. At least one-half of these units shall be completed among the last 20 semester units counted toward the degree. Credit in summer session may be substituted for regular session unit requirements on a unit-for-unit basis. Extension courses may not apply on the residence requirement.

U. S. History and Constitution Requirement

The requirements set by California law of (1) American history (2) United States Constitution, and (3) California State and local government must be met by all graduates. This includes demonstrating competence in the Constitution of the United States, in American history, ncluding the study of American institutions and ideals, and the principles of state and local government established under the Constitution of this State. The requirements may be met by optional examinations, or by completing successfully one course from each of the following groups:

1. American History: History 250.
2. United States Constitution: Government 150.
3. California State and Local Government: Government 150, 200.

Transfer students who have already met these requirements shall not be required to take further courses or examinations therein.

Optional examinations for both American history and United States Constitution will be held on November 18, 1960 and April 21, 1961, 1 to 4 p.m. Information on the above requirements may be obtained from the Office of Admissions or from the Social Sciences Division, American Institutions Committee.

Students will be eligible to take the optional examinations under the following conditions:

1. All graduate students at Los Angeles State College will be eligible, provided they meet requirement (3) below.
2. Undergraduates will be eligible to qualify by examination only when their program *upon admission* does not allow sufficient units to complete the necessary courses.
3. Students must be currently enrolled in Los Angeles State College.
4. Students must not have already failed this optional examination.
5. Application must be made to the American Institutions Committee at least three weeks prior to date of examination.

All applications must be approved by the Committee on American Institutions.

Faculty Approval

All candidates for graduation must be approved by the faculty at a formal meeting called by the President for that purpose.

Application for Graduation

A formal application for graduation must be filed by the student with the Office of Admissions and Records. The registration period is the final deadline for filing this application.

SCHOLARSHIP POLICIES

Grading System

The marking system is as follows. The letters A, B, C, and D indicate passing grades: A, excellent; B, above average; C, average; D, below average; Cr. denotes credit, no letter grade assigned. Failure is indicated by F. WF means "withdrew failing." This mark is assigned a student who is below average at the time he is allowed to withdraw from a course. WP ("withdrew passing") is assigned if a student is doing average work or better at the time of official withdrawal. UW indicates "unofficial withdrawal."

If a student is unable to complete all of the semester's work, but has satisfactorily finished all except the final four weeks, he may receive an "incomplete" (recorded "Inc."). An "Inc." grade must be cleared within one year from the end of the semester in which it was received. Otherwise it remains an incomplete grade on the student's record and is counted as an "F" with units attempted but not as units passed or completed. In certain cases this rule will not apply to graduate students. Requirements for clearance are to be specified by the instructor concerned.

The scholarship average is obtained by dividing the total number of grade points by the total number of units attempted, or for which the student registered. Grade points are assigned as follows:

Grade A receives 4 points per unit of the course taken.
Grade B receives 3 points per unit of the course taken.
Grade C receives 2 points per unit of the course taken.
Grade D receives 1 point per unit of the course taken.
Grade F or WF or UW or Inc. receives 0 points per unit of the course taken.
Grade WP is not figured in the grade point average.
Grade CR is not figured in the grade point average.

Note: The above grade-point system became effective September 1, 1956. Previously a grade of A has given 3 grade points per unit; B, 2 grade points; C, 1 grade point; D and F, 0 grade points.

Repeated Courses

Students may repeat courses in which a grade of D, F, or I was previously received. However, both the original grade and grade earned in the repeated course will be figured in the calculation of the student's grade point average. No additional credit toward semester unit requirements will be allowed for repeat of course in which the initial grade was "D."

Scholastic Standing

Students who are experiencing scholastic difficulties are urged to discuss their progress with their adviser, as well as with the college's Counseling Office.

Probation: A student whose scholarship record shows a grade point average of less than "C" (2.0) for all work attempted at Los Angeles State College will be placed on probation.

Probationary status will be continued until the student has removed the grade point deficit or is disqualified.

Disqualification: A student who earns less than a "C" (2.0) average in a semester while on probationary status will be disqualified. Disqualified students are not permitted to register. Under certain conditions disqualified students may apply for readmission to the college through the Office of Admissions and Records.

Honorable Dismissal

In order to qualify for an honorable dismissal, the student must be free from financial obligations to the college and from disciplinary action. Academic disqualification does not constitute dishonorable dismissal.

Examinations

Final examinations are required in all courses. No final examination shall be given to individual students before the regular scheduled time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements *in advance* with the instructor to have an "incomplete" grade reported and must then follow the regulations concerning make-up of "incomplete" grades. No exception will be made to this rule without the written approval of the instructor, the Division Chairman, and the Dean of the College.

Attendance Regulations

The effect of absence from class upon the student's grade is at the discretion of the individual faculty member. In courses involving lectures and direct student participation, absence will undoubtedly affect the student's grade. The student is responsible to the instructor to make up work missed because of unavoidable absence.

THE GRADUATE PROGRAM

The graduate program at Los Angeles State College offers the master of arts and the master of science degrees in fields as listed below.

THE MASTER OF ARTS DEGREE

The purpose of the master of arts degree is to provide for one or more of the following objectives:

(1) To improve the candidate's professional competence in educational service.

(2) To develop the candidate's ability for continued self-directed study in his field of specialization.

(3) To afford an opportunity for the candidate to broaden his cultural background, to develop his personal and social responsibility, and to prepare for community leadership.

The degree is offered in the following fields of concentration:

- American studies
- Art
- Biological science
- Drama
- Economics
- Elementary School Administration
- Elementary School Teaching
- English
- Geography
- Government
- Guidance
- Health and Safety Education
- History
- Language arts
- Mathematics
- Music
- Physical education
- Psychology
- Secondary School Administration
- Secondary School Teaching
- Secondary Teaching with Specialization in Industrial Arts
- Social Science
- Sociology
- Special Education
- Speech
- Speech and Drama

THE MASTER OF SCIENCE DEGREE

The purpose of the master of science degree is to improve the candidate's competence in his chosen occupation, and to develop his ability for continued self-directed study.

The degree is offered in the following fields:

- Business Administration
- Psychology
- Public Service, with options in
  - Police Administration
  - Government
- Recreation
- Vocational Rehabilitation Counseling

Specific requirements for the degree in each field are contained in the descriptions of programs under the appropriate departmental listings. Those requirements as well as the following college requirements should be carefully studied by students seeking a master's degree at the college. *Responsibility for meeting all requirements rests with the student.*

ADMISSION TO GRADUATE STANDING

In accordance with the newly established policy of the college, all students, including graduates, are required to become matriculated. An appropriate baccalaureate degree from an accredited institution is required for admission to graduate standing (the same as matriculation). Applications for admission and other information may be obtained from the Office of Admissions and Records.

1. Graduates of Los Angeles State College will automatically receive admission to graduate standing if they maintain continuous registration in the college. If residence is interrupted for one or more semesters, students must file a returning student's application for readmission.
2. New graduate students must file an application for admission with the Office of Admissions and Records and arrange to have *two* copies of transcripts of all previous college work sent to the Office of Admissions and Records.
3. Students who have been in continuous attendance at the college need not file an application for admission for each succeeding semester, *except that continuing students who have been in attendance as nonmatriculated students must file an application for admission as new students for the fall semester, 1960.*
4. Graduate students who are unable to obtain necessary transcripts for their first semester of attendance may be given *temporary* admission to graduate standing for *one semester only* by filing an application for admission, including a declaration that they possess either an acceptable bachelor's degree or a valid teaching or public school service credential.
    a. Graduate students granted *temporary* admission to graduate standing who are *not* seeking a graduate degree or credential must have a transcript from the college granting the bachelor's degree sent to the Office of Admissions and Records in order to register for the second and succeeding semesters.
    b. Graduate students granted *temporary* admission to graduate standing who are seeking a graduate degree or credential must file *two* copies of transcripts of all previous college work and fulfill all other requirements for admission to graduate standing in order to register for the second and succeeding semesters.

GRADUATE RECORD EXAMINATION

The Aptitude Test of the Graduate Record Examination is required of all graduate students seeking a graduate degree or graduate credential. If this test has been taken previously, the student should arrange with the Educational Testing Service, Princeton, New Jersey, to have a record of scores sent to the Graduate Study office. All other students must make arrangements to take the test with the College Test Office, located in the Administration Building. The test should be taken as early as possible in order that advisers may have the results as an aid in counseling students about their programs.

ADVANCEMENT TO CANDIDACY

Requirements for advancement to candidacy for the master's degree are:

1. Admission to the college with graduate standing, which includes filing duplicate transcripts of all previous college work.
2. Completion of the aptitude test of the Graduate Record Examination and filing of test scores in the Graduate Studies Office.
3. Consultation with adviser and planning of program.
4. Approval of program by adviser and division or department chairman.
5. (a) A 2.75 (B—) upper-division grade point average; or
   (b) complete in residence 12 units of the proposed degree program including at least 6 units in the field of concentration, with a grade point average of 3.00 (B) or better.
6. Completion of all prerequisites to the degree program and enrollment in one or more courses in the field of concentration.
7. Approval of program and other requirements by the Graduate Study Committee. Action of the Graduate Study Committee will be based upon the student's academic record, personal qualifications, health, and professional promise.

   In making out his program and in applying for advancement to candidacy, the student should keep in mind the requirements for graduation as listed below, particularly the regulation that at least nine units must be completed after advancement to candidacy.

   The importance of early adviser conference and program planning cannot be over-emphasized. Each student working toward a master's degree must work out his program with an adviser assigned by the chairman of the division in which the student expects to receive his degree. Early in his first semester of residence (if the workload permits), each student will receive from the Office of Admissions and Records a "Credit Summary" upon the basis of which he and his adviser may plan his program. The program sheet, as worked out by the student and his adviser and signed by the appropriate division or department head, becomes the student's application for advancement to candidacy.

Program-application forms are available in each division office. Two copies of the special ozalid paper form are required, in addition to the work forms to be retained by the student and his adviser. The two official forms should be forwarded by the adviser, department head or division chairman to the Graduate Studies Office for review and action by the Graduate Study Committee.

CHANGE OF PROGRAM

Conformance to the final, approved program is required. Proposed changes must be approved in writing by the adviser, division chairman or department head, and the Dean of Graduate Studies. Change of program forms are available in division offices or in the Graduate Study Office.

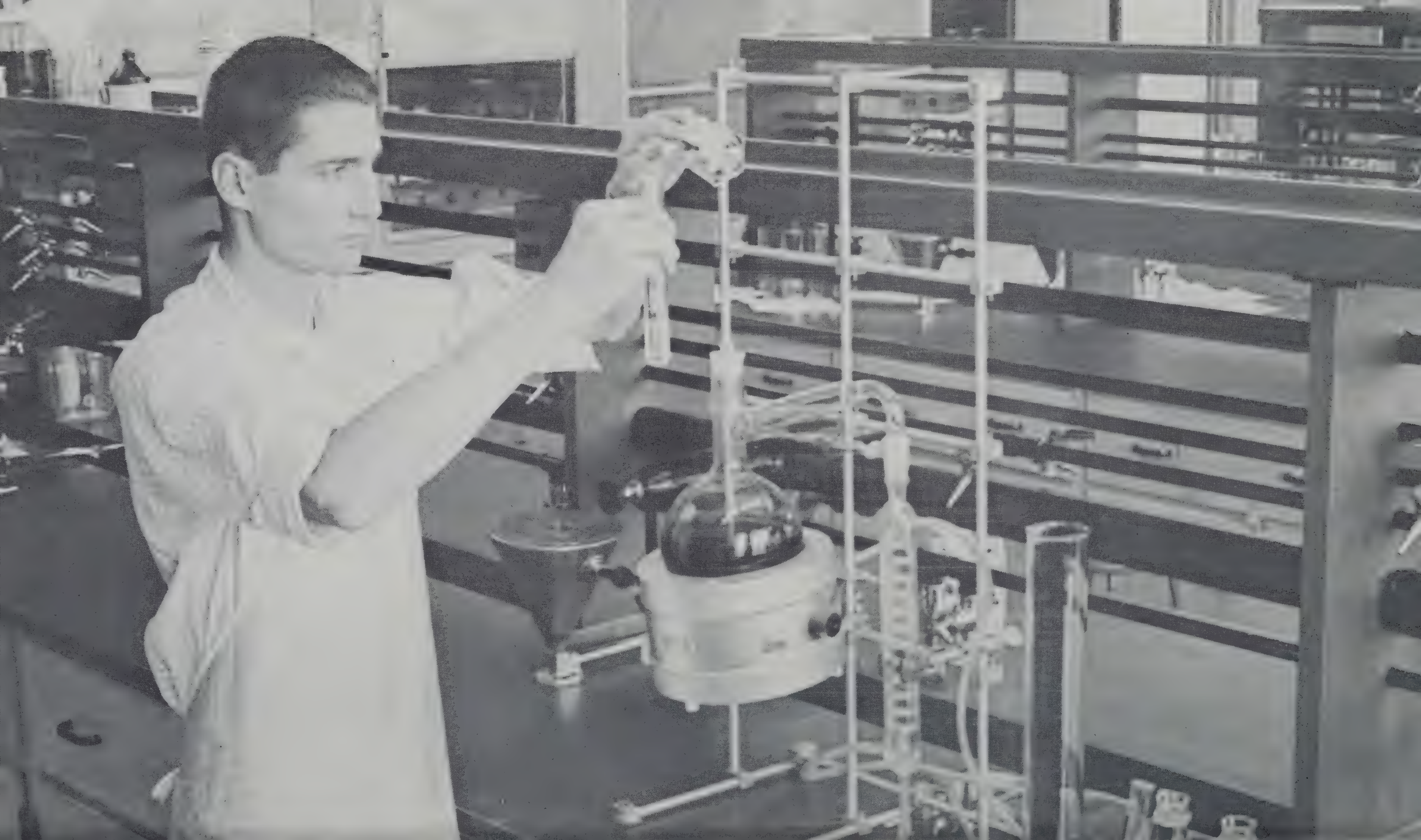
REQUIREMENTS FOR GRADUATION

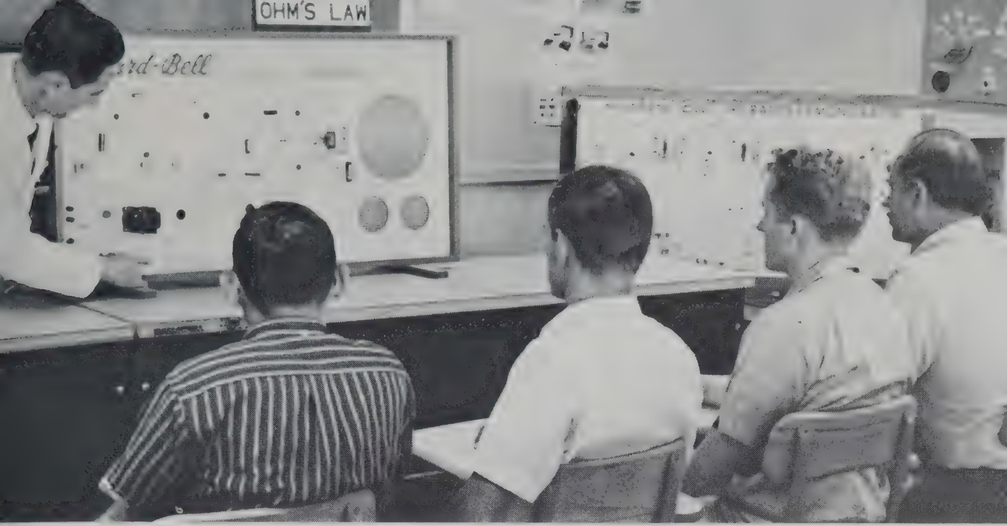
1. At least 30 units of approved courses taken within the seven years immediately preceding the date when all requirements for the degree are completed and the degree is granted. Within these 30 units, the following requirements also apply:
    a. Each program requires a minimum of 12 units in strictly graduate ("500") courses.
    b. Courses numbered "399" and below are not acceptable for master's programs.
    c. Completion of a field of concentration of a minimum of 15 units, including not less than nine units in strictly graduate courses, as prescribed by a division of the college authorized to offer a graduate program.
    d. Each program must have at least six units outside the field concentration. (Does not apply to the Master of Science degree.)
    e. At least 24 units must be completed in residence at Los Angeles State College.
    f. A student who is working toward the Master of Science degree must have at least one year of work-study experience or one year of full-time (or equivalent part-time) occupational experience in the major field or a closely related field. Those students who have no such experience are required to complete six units of directed field study in addition to the regular 30 units required for the Master of Science degree.
2. Postgraduate courses completed more than seven years prior to the time of expected graduation must be replaced by other more recent courses; or they may be validated by examination in the relevant subject field.

3. The master's degree program may include no more than six units total credit for acceptable: (a) transferred work; (b) extension courses; (c) student teaching; (d) activity courses; (e) work-study; or any combination of these. The restriction as to work-study does not apply to the Master of Science degree. Student teaching, however, is *not* acceptable for the M. S. degree. All such courses must be completed at the graduate level and at an accredited institution in order to be accepted in the degree program.
4. At least nine units of the degree program must be completed *after* the semester in which the student has been formally advanced to candidacy.
5. Each student must have a 3.0(B) gradepoint average in the field of concentration, in all courses submitted to fulfill requirements for the degree, and in all work beyond the bachelor's degree whether taken at Los Angeles State College or any other college
6. Every program requires the passing of a comprehensive examination and/or the completion of a thesis or project in the field of concentration as prescribed by the appropriate division of the college.
7. Every program must conform with specific requirements for the degree program as described in this catalog and/or as determined by the student's adviser.

GENERAL PROVISIONS FOR MASTER'S DEGREE

1. Advancement to candidacy is prerequisite to enrollment for the graduate project or thesis (599) and for taking the comprehensive examination.
2. An undergraduate student who is in his final semester may apply toward graduate credit the difference between the number of units necessary for graduation and a maximum of 15 units, provided he has maintained a 2.5 overall average in all upper division work Only a student with a 3.0 average may include in this allowance a maximum of 3 units of "500" courses. Requests for graduate credit under this provision must be made by petition to the Petitions Committee during the term in which the courses are taken
3. Students who wish to obtain a second master's degree from Los Angeles State College must complete a minimum of 15 semester units of new work and satisfy all other requirements of the new degree. Approval for the second degree will be given only after the first degree has been awarded.
4. Courses in which the student receives a grade of "D" are not acceptable for unit credit on the degree program.

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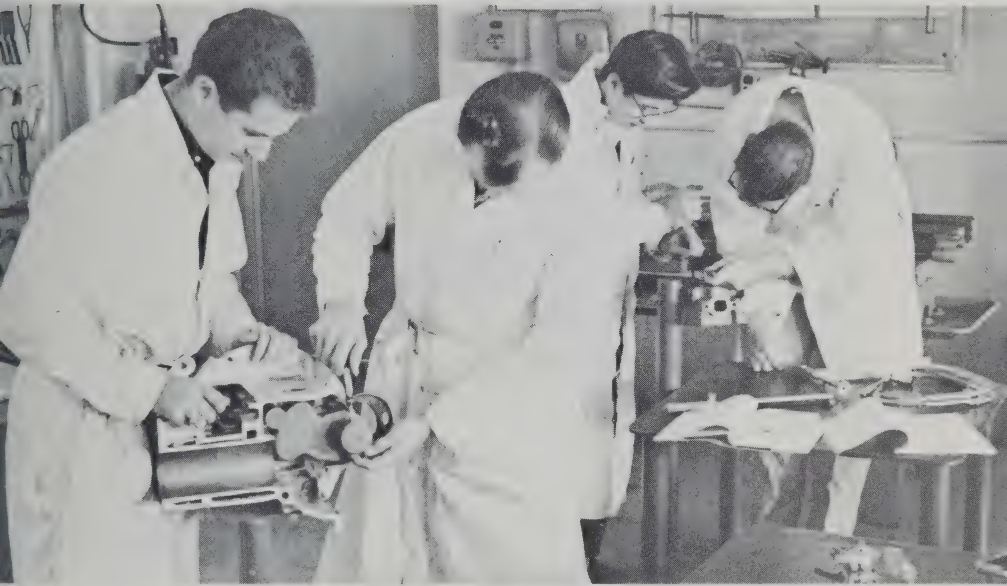

AUTO SHOP (Above) ▲ and DRAFTING (Below) ▼

DIRECTED TEACHING

TEACHING CREDENTIALS

Los Angeles State College is accredited by the State Board of Education to recommend qualified students for the following credentials:

- General Elementary Credential
- Kindergarten-Primary Credential
- Junior High School Credentials
- General Secondary Credential *
- Special Secondary Credential in
  - Art
  - Business education
  - Industrial arts
  - Limited industrial arts
  - Music
  - Nursing education
  - Physical education
- Credential to Teach Exceptional Children, with specialization in
  - Visually Handicapped *
  - Deaf and Hard-of-hearing in Special Day Classes
  - Speech Correction and Lipreading in Remedial Classes
  - Mentally Retarded
  - Orthopedically Handicapped including the Cerebral Palsied *
- Elementary Administration Credential *
- Secondary Administration Credential *
- Supervision Credential *
- General Pupil Personnel Services Credential *
  - Pupil counseling
  - Child welfare and attendance
  - School psychometry
  - School psychology

Los Angeles State College offers courses which may qualify a graduate to receive the following credentials upon *direct* application to the State Department of Education:

- Special secondary credential in homemaking education
- Health and development credential–school nurse

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* Graduate credential for which the Aptitude Test of the Graduate Record Examination is required.

AMERICAN STUDIES
(Inter-Divisional Program)

STAFF: Faculty from co-operating disciplines within the Divisions of Business and Economics, Education, Fine Arts, Language Arts, and Social Sciences.

BACHELOR'S DEGREE CURRICULA

Major in American Studies

Designed for students who (1) elect to study the liberal arts through the interdisciplinary approach of American Studies, or (2) plan to engage in such professions as journalism, librarianship, government service, writing or others where a broad knowledge of American society is required.

Lower Division

No lower division requirements.

Upper Division

The student will take from 6 to 9 units in each of four fields, with 9 units required in at least two of the four fields. In addition he will take 12 units of integrating courses in American Studies.

American Studies (12 units)

American Studies 401—The Study of American Culture	3 units
American Studies 402—Ideas in America	3 units
American Studies 403—American Popular Culture	3 units
American Studies 404—The Avant-Garde in American Intellectual Life	3 units

American Language and Literature (6-9 units)

At least *one* course from the following .... 3 units
- English 470—Masters of American Literaure, 1620-1860 (3)
- English 471—Masters of American Literaure, 1860-1950 (3)
- English 475—Major American Novelists: Crane to Faulkner (3)

At least *one* course from the following .... 3 units
- English 472—Twentieth Century American Literature (3)
- English 473—The American Renaissance (3)
- English 491—Studies in Selected American Writers (3)

American Philosophy and the Fine Arts (6-9 units)

Philosophy 430—American Philosophy .... 3 units

At least *one* course from the following .... 3 units
- Art 441—American Art (3)
- Philosophy 440—Contemporary Philosophy (3)

American Social Studies (6-9 units)

At least *one* course from the following .... 3 units
- Government 413—American Political Thought (3)
- Geography 421—Geography of the U. S. and Canada (3)
- History 476—Economic History of the U. S. (3)
- History 477—Social History of the U. S. (3)
- History 479—Constitutional History of the U. S. (3)

At least *one* course from the following .... 3 units
Economics 303—Money, Banking and the Economy (3)
Economics 390—Current Economic Problems (3)
Government 305—American Federal Government (3)
Government 414—Public Opinion and Lobbies (3)
History 467—The U. S.: The Colonial Period (3)
History 468—The U. S.: The Nineteenth Century (3)
History 469—The U. S.: The Twentieth Century (3)
History 478—Diplomatic History of the United States (3)
History 481—The Westward Movement and the West (3)
Sociology 330—The City (3)
Sociology 424—Mass Communication and Propaganda (3)
Sociology 432—Regional Sociology (3)
Sociology 460—Intergroup Relations (3)

American Origins in Western Civilization (6-9 units)

At least *one* course from the following .... 3 units
Art 421—Baroque Art (3)
Art 426—Modern Art (3)
English 463—The English Renaissance (3)
English 465—The Age of Reason (3)
English 467—The Romantic Age (3)
English 468—The Victorian Age (3)
English 480—Literature and the Fine Arts, B. C. (3)
English 481—Literature and the Fine Arts, A. D. (3)
History 434—Europe: The Renaissance to Waterloo (3)
History 441—Hanoverian England (3)
History 442—The British Empire (3)
Philosophy 338—Comparative Religions (3)
Speech 443—History of the Theater (3)
Speech 467—History of Public Address (3)

At least *one* course from the following .... 3 units
Economics 480—Comparative Economic Systems (3)
Geography 423—Geography of Europe (3)
Government 412—Political Theory (3)
Government 430—European Government (3)
Government 442—The Anglo-American Legal System (3)
History 411—The Early Mediterranean World and Greece (3)
History 412—History of Rome (3)
History 421—The Early Middle Ages (3)
History 422—The Later Middle Ages (3)
History 432—Europe: The Nineteenth Century (3)
History 433—Europe: The Twentieth Century (3)
History 438—Economic History of Europe (3)
History 440—Tudor and Stuart England (3)

Additional courses in any two of the required four fields .... 6 units

(Additional courses are available to the student if selected with consent of the American Studies adviser.)

42 units

TYPICAL FOUR-YEAR COURSE SEQUENCE FOR AMERICAN STUDIES MAJOR

Since the American Studies curriculum is characterized by the scope and breadth of its offerings, the following sequence of courses is purely for illustrative purposes rather than prescribing a specific program the student is to follow. The student will be assisted in planning his entire program in the major by an American Studies adviser.

Lower Division

Since there are no lower division requirements, the student follows the general education program, choosing, in addition, electives from the fields of American language and literature, American philosophy and fine arts, American social studies, and American origins in western civilization.

Junior Year

First semester	*Units*	*Second semester*	*Units*
Am. Studies 401—Study of Am. Culture	3	Am. Studies 402—Ideas in Am.	3
Engl. 470—Am. Lit. 1620-1860	3	Engl. 472—20th Cent. Am. Lit.	3
Phil. 430—Am. Phil.	3	Hist. 477—Soc. Hist. of U. S.	3
Hist. 442—The British Emp.	3	Econ. 480—Comp. Econ. Sys.	3
Electives	3	Electives	3

Senior Year

Am. Studies 403—Am. Popl. Culture	3	Am. Studies 404—Avant-Garde in Am. Intellect. Life	3
Art 441—American Art	3	Geog. 421—Geog. of Europe	3
Govt. 418—Am. Pol. Parties and Politics	3	Sp. 467—Hist. of Publ. Addr.	3
Electives	6	Electives	6

General Secondary Teaching Program

With a B.A. in American Studies

This program combines a baccalaureate major in American Studies and two teaching minors, one in social studies and the other in English. The student must meet the following requirements:

1. Professional education requirements. See pages 132-135.
2. Requirements of the general secondary teaching minor in English. See page 182.
3. Requirements of the general secondary teaching minor in social studies. See page 333.
4. Courses in the fields of American Studies chosen with the approval of an American Studies adviser.

Students interested in this program will be assisted in planning their entire program in the major by an American Studies adviser.

MASTER OF ARTS DEGREE

1. Prerequisite: B.A. degree with a major or its equivalent in any of the humanities, in any of the social sciences, or in American Studies.
2. Required core in area of concentration.
   At least *two* courses from the following .... 6 units
   - American Studies 401–The Study of American Culture (3)
   - American Studies 402–Ideas in America (3)
   - American Studies 403–American Popular Culture (3)
   - American Studies 404–The Avant-Garde in American Intellectual Life (3)
3. Six courses selected with the approval of the American Studies adviser as follows .... 18 units

   American Language and Literature (3–6 units)
   One or two courses from the following:
   - English 505–Seminar in Language (3)
   - English 520–Seminar in Literature (3)
   - Journalism 520–Seminar in Journalism (3)
   - Language Arts 506–Seminar in Communication Problems (3)
   - Speech 567–Studies in American Public Address (3)
   - Speech 560–Speech Education in America (3)

   American Philosophy and the Fine Arts (3–6 units)
   One or two courses from the following:
   - Art 500–Seminar in Art Education (3)
   - Art 531–Seminar in Art History (3)
   - Music 401–Psychology of Music (2)
   - Philosophy 440–Contemporary Philosophy (3)
   - Philosophy 475–Aesthetics (3)

   American Social Studies (3–6 units)
   One or two courses from the following:
   - Economics 510–Advanced Economics of an Enterprise System (3)
   - Economics 520–Contemporary Economic Theory (5)
   - Government 505YZ–Seminar in Contemporary American National Government (3-3)
   - Government 518–Seminar in Political Problems (3)
   - Government 560–Seminar in Public Administration (3)
   - Government 561–Seminar in State and Local Administration (3)
   - History 575–Seminar in United States: Recent (3)
   - History 577–Seminar in United States: Cultural and Intellectual (3)
   - History 581–Seminar in United States: The West (3)
   - Psychology 500–Seminar in Advanced General Psychology (3)
   - Psychology 501–Seminar in Advanced General Psychology (3)
   - Psychology 522–Seminar in Social Psychology (3)
   - Social Science 550AB–Seminar in Social Science (3-3)
   - Sociology 514–Studies in Contemporary Sociology (3)
   - Sociology 540–Seminar in Marriage and the Family (3)
   - Sociology 570–Studies in Social Welfare and Corrections (3)

   American Education (0–6 units)
   From the following:
   - Education 507–History and Philosophy of Education (3)
   - Education 510–Advanced Educational Psychology (3)
   - Education 525–Educational Sociology (3)
   - Education 553–The Core Curriculum in Junior and Senior High Schools (2)

4. Electives selected with the approval of adviser .... 6 units
5. Required Comprehensive Examination: This written examination will be administered by the interdivisional American Studies Committee. If necessary the written examination will be supplemented by an oral one.

COURSES OF INSTRUCTION

401 The Study of American Culture (3) Fall
Introduction to interdisciplinary study of American culture. Materials, methods, and problems in the study of a civilization in comprehensive terms.

402 Ideas in America (3) Fall, Spring
Significant social, political, economic, religious, and philosophic concepts which characterize American civilization; analysis of these concepts as reflected in representative statements, ranging from historical documents to imaginative literature. (Formerly Language Arts 400.)

403 American Popular Culture (3) Fall, 1960
Study of popular culture as exemplified in radio and television programs, motion pictures, advertising, mass circulation magazines, popular music, and other mass entertainments, in order to extract the underlying social significance and aesthetic implications.

404 The Avant-Garde in American Intellectual Life (3) Spring, 1961
Examination of a number of movements on the frontiers of American intellectual life.

ANTHROPOLOGY

(In the Division of Social Sciences)

See Sociology and Anthropology Section

ART

(In the Division of Fine Arts)

STAFF: Manion (Department Head), Askin, Brainard, Cassady, Cornish, Daywalt, Fuller, Heath, Hoffman, Johnson, Little, Mack, Rossell, Roysher, Silverman, Starbird, Schnitzler, Takeshita, Wexler, Williams.

BACHELOR'S DEGREE CURRICULA

Major in Art

The curriculum in art and the requirements for the degree provide a broad base and thorough grounding in all phases of art. The department considers this breadth essential to each art major regardless of his eventual field of specialization. With this foundation, a student may prepare himself as a teacher, designer, painter, or craftsman by selecting appropriate art courses and electives in consultation with his adviser.

Lower Division

Art 101—Art in Modern Life	2 units
Art 102—Introduction to Craft Materials	2 units
Art 103—Art Structure	2 units
Art 104—Introduction to Drawing	2 units
Art 212—General Crafts	2 units
Art 213YZ—Applied Art Structure	2 units
Select from the following	2 units
Art 214—Introduction to Sculpture (2)	
Art 224—Descriptive Drawing (2)	
Art 234—Introduction to Painting (2)	
Art 244—Introduction to Life Drawing (2)	
Electives in Art	2 units

Upper Division

Select from the following	6 units
Art 411—Ancient Art History (3)	
Art 416—Medieval Art History (3)	
Art 421—Baroque Art (3)	
Art 426—Modern Art (3)	
Art 431YZ—Oriental Art (3-3)	
Art 441—American Art (2)	
Art 461—Primitive Art (3)	
Select from the following	6 units
Art 324YZ—Clay Modeling (2-2)	
Art 404YZ—Advanced Painting (3-3)	
Art 434YZ—Watercolor Painting (3-3)	
Art 444YZ—Oil Painting (2-2)	
Art 464AB—Life Composition (2-2)	
Art 484YZ—Sculpture (2-2)	

Select from the following .... 4 units
- Art 307—Ceramics (2)
- Art 372YZ—Metalsmithing-Jewelry (2-2)
- Art 412YZ—Advanced Ceramics (2-2)
- Art 422YZ—Advanced Crafts (3-3)
- Art 432—Textiles (2)
- Art 447—Weaving (2)
- Art 462YZ—Metalsmithing-Forging (2-2)
- Art 482YZ—Metalsmithing-Raising (2-2)

Select from the following .... 4 units
- Art 408YZ—Graphic Communication (2-2)
- Art 413AB—Lettering, Calligraphy, Typography (2-2)
- Art 423—Product Design (2)
- Art 443—Achitectural Design (2)
- Art 463—Portfolio (2)
- Art 473—Costume Design (2)
- Art 478—Fashion Design (2)
- Art 483—Interior Design (2)

Electives in Art .... 4 units

40 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR ART MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Art 101—Art in Mod. Life	2	Art 102—Intro. to Crft. Mat.	2
Art 103—Art Structure	2	Art 104—Intro. to Drawing	2
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	Art 150—Art, Dance, Music	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Govt. 150—Govt. & Am. Soc.	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Phys. Educ. 150	1	Phys. Educ. elective	1
Elective	2	Elective	2

SOPHOMORE YEAR

Art 212—Gen. Crfts.	2	Art 213—Applied Art Struct.	2
Art 214, 224, 234, or 244	2	Art Elective	2
Engl. 250—Underst. Lit.	3	Phil. 150—Phil. Ideas	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Hist. 250—U. S. History	3
Psych. 150—Human Behavior	3	Gen. Educ. Soc. Sci. elective	3
		Elective	3

JUNIOR YEAR

Art 411, 421, 431, or 441	3	Art 408, 413, 463, 473, *or* 493	2
Art 324, 404, 434, 444, 464, or 484	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372, 482	2
H&S 350—Personal Health	2	Art 324, 404, 434, 444, 464, or 484	2
Electives	7	Gen. Educ. elective	3
		Electives	7

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* See "Note" on page 55.

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Art 416, 426, 431, or 451	3	Art 408, 413, 463, 473, 478, 483 or 493	2
Art 324, 404, 434, 444, 464, or 484	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372, 482	2
Gen. Educ. elective	3	Art elective	2
Electives	6	Electives	9

Special Secondary and General Secondary Teaching Majors

Requirements for the special secondary and general secondary teaching majors are the same as for the major in Art *with the following exception*: Art 300—Art for the Elementary School (2) is required and upper division electives in art are reduced to 2 units. The general secondary teaching major requires a teaching minor in a different teaching field and a graduate year including additional professional education. See also pages 132-135 for professional education requirements.

SUGGESTED COURSE SEQUENCE FOR ART MAJOR WITH SPECIAL SECONDARY CREDENTIAL

Freshman Year and Sophomore Year Same as for Art Major

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Art 300—Art in Elem. Sch.	2	Art 408, 413, 463, 473, or 493	2
Art 411, 421, 431, or 441	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372 or 482	2
Art 324, 404, 434, 444, 464, or 484	3	Art 324, 404, 434, 444, 464, or 484	2
H&S 350—Personal Health	2	Gen. Educ. elective	3
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 471—Sec. Educ.	5
Educ. 413—Psych. and Soc.	5	Educ. 493—Methods	2

SENIOR YEAR

Art 416, 426, 431, or 451	3	Art 408, 413, 463, 473, 478, 483, or 493	2
Art 324, 404, 434, 444, 464, or 484	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372, or 482	2
Gen. Educ. elective	3	Art elective	2
Educ. 443Y—Directed Teach.	3	Educ. 490—Audio-Vis.	2
Educ. 444Y—Problems Sec.	1	Educ. 443Z—Directed Teach.	3
Elective	2	Educ. 444Z—Problems Sec.	2
		Elective	2

SUGGESTED COURSE SEQUENCE FOR ART MAJOR WITH GENERAL SECONDARY CREDENTIAL

Freshman Year and Sophomore Year Same as for Art Major

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Art 300—Art in Elem. Sch.	2	Art 408, 413, 463, 473, or 493	2
Art 411, 421, 431, or 441	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372, or 482	2
Art 324, 404, 434, 444, 464, or 484	3	Art 324, 404, 434, 444, 464, or 484	2
H&S 350—Personal Health	2	Gen. Educ. elective	3
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 413—Psych. and Soc.	5
Minor	5	Minor	2

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Art 416, 426, 431, or 451	3	Art 408, 413, 463, 473, 478, 483 or 493	2
Art 324, 404, 434, 444, 464, or 484	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372, or 482	2
Gen. Educ. elective	3	Art elective	2
Educ. 471–Sec. Educ.	5	Educ. 493–Methods (Major)	2
Minor	2	Minor	7

GRADUATE YEAR

Educ. 442Y–Directed Teach.	3	Educ. 480–Counsel. & Guid.	2
Educ. 444Y–Problems Sec.	1	Educ. 442Z–Directed Teach.	3
Educ. 490–Audio-Vis.	2	Educ. 444Z–Problems Sec.	2
Educ. 493–Methods (Minor)	2	Minor	3
Minor	3	Electives	5
Electives	4		

General Secondary Teaching Minor

Lower Division

Art 101–Art in Modern Life	2 units
Art 102–Introduction to Craft Materials	2 units
Art 103–Art Structure	2 units
Art 104–Introduction to Drawing	2 units
Electives in Art	2 units

Upper Division

Art 300–Art for the Elementary School	2 units
Art 330–Crafts in the Secondary School	2 units
Select from the following	2 units
Art 307–Ceramics (2)	
Art 372YZ–Metalsmithing-Jewelry (2-2)	
Art 432–Textiles (2)	
Select from the following	2-3 units
Art 404YZ–Advanced Painting (3-3)	
Art 434YZ–Watercolor Painting (3-3)	
Art 464AB–Life Composition (2-2)	
Electives in Art	2 units
	20-21 units

MASTER OF ARTS DEGREE

The purpose of the master of arts degree with the major in art is to improve the candidate's competence in educational service and in professional performance. It should stimulate his awareness of over all problems in art and develop his ability for continued self-directed study in the field of his professional service. It should encourage him to seek out or strengthen an area of special interest.

1. Prerequisites
   a. Graduate standing.
   b. Upper division art core requirements or equivalent.

2. Area of Specialization
   - a. Art 531—Seminar in Art .... 3 units
   - b. Graduate courses in area .... 6 units
     - Art 500—Problems in Art Education (3)
     - Art 501—Graduate Problems in Art History (3)
     - Art 502YZ—Graduate Problems in Crafts (3-3)
     - Art 503YZ—Graduate Problems in Design (3-3)
     - Art 504YZ—Graduate Problems in Representation (3-3)
   - c. "500" and "400" courses in area .... 6 units
     (Students must take 12 units of "500" courses)
   - d. Art 599—Graduate Project .... 3 units
3. Electives in art and related fields selected with assistance of graduate adviser .... 6 units
4. Outside the field .... 6 units

COURSES OF INSTRUCTION

101 Art in Modern Life (2) Fall, Spring
Art in relationship to contemporary living. Appreciation and understanding of what art contributes to the environment, its influence on personalities, and its part in our democratic culture.

102 Introduction to Craft Materials (2) Fall, Spring
Provides comprehensive experiences in the materials of the crafts; wood, clay, metal, paper, and leather.

103 Art Structure (2) Fall, Spring
Introductory experiences in two and three dimensional structure including space arrangement, lettering, color theory, and vocabulary.

104 Introduction to Drawing (2) Fall, Spring
Drawing experiences using a variety of media including charcoal, pencil, pen and ink and conté crayon. Development of individual creative understanding of form, structure, light and dark color, and the relationships of the visual structural elements.

150 Art, Music, and Dance (3) (General Education)
Approaches to appreciating, understanding and creating art, dance, and music.

212 General Crafts (2) Fall, Spring
Experiences in the processes of the crafts involving use of wood, clay, metal, leather, and fabric. Techniques of printing; linoleum block printing; stencilling; silk screen printing. Basic elements of weaving and bookbinding.

213Y-Z Applied Art Structure (2-2) Fall, Spring
Experiences in two and three dimensional media, work with color and space relationships, study of symbolism as it relates to graphics; rendering; and the use of materials. Transfer of abstract experiences into real and applied situations.

214 Introduction to Sculpture (2) Fall, Spring
Basic sculptural experiences and use of sculpture tools. Work in stone, clay, and metal; direct carving and modeling; armature construction for heads and figures; making molds and casts.

224 Descriptive Drawing (2) Fall, Spring
Laboratory course to develop skills in all types of rendering; perspective; orthographic projection; isometric drawing.

234 Introduction to Painting (2)
Creative use of color based on an understanding of visual structural elements. Study and manipulation of various media including watercolor and oil.

244 Introduction to Life Drawing (2)
Basic concepts of figure drawing. Experience includes experimentation leading toward understanding of the form, structure, and proportions of the human figure as applied to visual expression.

300 Art for the Elementary School (2) Fall, Spring
Basic skills and understanding that enable the primary and elementary teacher to provide art experiences for children. Work with finger painting, watercolor painting, calcimine painting, mapmaking, manuscript writing, mural painting, figure drawing, chalk drawing, and other media.

307 Ceramics (2) Fall, Spring
Prerequisites: Art 102 or consent of instructor. Introduction to clay and clay technology. A foundation course with laboratory practice in hand construction processes, decorative processes and experimental research into the nature of clay.

320 Crafts for Elementary Schools (2) Fall, Spring
Basic skills and understandings that enable the primary and elementary teacher to provide crafts experiences for children. Work with clay, leather, bookbinding, weaving, block printing, paper enrichment, and other craft materials and processes.

324Y-Z Clay Modeling (2-2) Fall, Spring
Experiences in using clay as an expressive medium. Various approaches in modeling forms from nature and in the abstract. Uses of texture and surface treatment. Some experience in casting.

330 Crafts in the Secondary School (2) Fall, Spring
Basic skills and understandings which enable the seecondary schoolteacher to provide worthwhile craft experiences in keeping with the growth and development characteristics of the secondary school student.

340 Industrial Arts in the Elementary School (2) Fall, Spring
Development of skills with handtools used in construction. Experience in making materials used in dramatic play to enrich the social studies. (Same as Ind. Arts 340.)

372Y-Z Metalsmithing—Jewelry (2-2) Fall, Spring
Manufacture and design of jewelry; basic bending, forming, and soldering techniques; stone setting.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study plan. Analysis and reports of the student's performance; regular group meetings.

404Y-Z Advanced Painting (3-3) Fall, Spring
Prerequisites: Two semesters in painting, design, or equivalent. Emphasizes planning, and fine craftsmanship. Related research in painting laboratory, field trips.

408Y-Z Graphic Communication (2-2) Fall, Spring
Experiences in rendering in a variety of media for direct mail packaging, point of sale, display, illustration, poster, and billboard.

410 (310) Art Experiences for Exceptional Children (2) Fall, Spring
Art experiences in painting, crafts, and other media which meet the needs of retarded or handicapped children. Work with paint, clay, leather, block printing, murals, and bookbinding.

411 Ancient Art History (3) Fall, Spring
Art of the ancient world from prehistoric times to the beginning of the Christian Era.

412Y-Z Advanced Ceramics (2-2) Fall, Spring
Prerequisite: Art 307 or consent of instructor. Use of the potter's wheel. Laboratory experience with the tools, clays, clay bodies, and techniques fundamental to the formation of ceramic ware by means of the potter's wheel.

413A-B Lettering, Calligraphy, and Typography (2-2) Fall, Spring
Emphasis on production and printing techniques. Working with presses, type fonts, inks, and papers.

416 Medieval Art (3) Fall, Spring
The progress of art from early Christian times through the Renaissance.

421 Baroque Art (3) Fall, Spring
Art of Western Europe from Michelangelo to the middle of the Nineteenth Century.

422Y-Z Crafts (3-3) Fall, Spring
Prerequisite: Consent of instructor. Development of advanced level skills in the design and execution of crafts projects.

423 Product Design (2) Fall, Spring
Practice in the manipulation of three dimensional form relative to the functional and merchandising requirements of industrial assignments.

426 Modern Art (3) Fall, Spring
Art of the Nineteenth Century and its development into contemporary times.

431Y-Z Oriental Art (3-3) Y–Fall; Z–Spring
Ancient graphic and plastic arts of China, Japan, India, and Persia. Evaluation of their contribution to the art expression of the present day.

432 Textiles (2)
Design of printed fabrics including use of silk screens, linoleum block prints, stencils, and dyes. Emphasis on creative design and experimentation.

434Y-Z Watercolor Painting (3-3) Fall, Spring
Prerequisites: Art 104. Techniques of watercolor painting. Advanced studies in pictorial construction through landscape figure and still life.

441 American Art (2) Fall, Spring
History of the painting, sculpture, architecture, and minor arts of America from the coming of the white man to the present.

443 Architectural Design (2) Fall, Spring
Study of exterior and interior problems and solutions inherent in domestic and industrial architecture.

444Y-Z Oil Painting (2-2) Fall, Spring
Development of technique in oil painting through interpretation of landscape, still life, figure and non-objective themes.

447 Weaving (2) Fall, Spring
Table loom and floor weaving; reading and writing of pattern drafts. Particular attention to creative weaving based on experimentation with variety of material used for warp and weft.

461 Primitive Art (3) Fall, Spring
Study of the arts of primitive peoples, past and present, including American Indians, African Negro, and the Pacific Islanders and their relation to the cultures.

462Y-Z Metalsmithing—Forging (2-2) Fall, Spring
Prerequisite: Art 372 or consent of instructor. Beginning and advanced techniques of forging metal; forming of flatware, decorative sections, handles, and special applications.

463 Portfolio (2) Fall, Spring
Techniques, methods, and media of displaying portfolio form. Laboratory, field trips, and accompanying lectures. Of especial value to art majors who wish to enter the teaching field.

464A-B Life Composition (2-2) Fall, Spring
Prerequisite: Art 104, or consent of instructor. Use of the human figure in composition utilizing various media and techniques.

473 Costume Design (2) Fall, Spring
Develops skills necessary to design costumes for stage, street, and other occasions. Recommended particularly for Home Economics students.

474Y-Z Print Making (2-2) Fall, Spring
Graphic processes: etching, engraving, lithography, woodblock printing. Work in black and white, and color.

478 Fashion Design (2) Fall, Spring
Experiences in fashion design, its relation to high style, and the commercial development of fashion. Working with rendering and production methods.

482Y-Z Metalsmithing—Raising (2-2) Fall, Spring
Prerequisite: Art 372, or consent of instructor. Beginning and advanced hollowware techniques; sheet metal and stretch processes; spouts, handles, bodies, and box forms; hinging.

483 Interior Design (2) Fall, Spring
Prerequisite: Two semesters of design, one semester of drawing. The elements of visual expression and design related to contemporary concepts of interior work and living space needs. Recommended for Home Economics students.

484Y-Z Advanced Sculpture (2-2) Fall, Spring
Prerequisite: Art 214, or consent of instructor. Realization of the human and animal forms in permanent materials. Techniques of stone carving, casting, and making of kiln-fired sculptures.

493 Commercial Graphics (2) Fall, Spring
Prerequisite: Art 103 or consent of instructor. Basic technical illustration methods for the presentation of service instructions, production methods, and sales promotion visual material.

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

500 Problems in Art Education (3) Fall, Spring
Prerequisites: Teaching experience, 20 units of art, or consent of instructor. Opportunities for teachers in the field to evaluate their experiences in the light of new techniques and concepts, resolve problems through group interaction and study, acquire a more complete

background in subject matter through individual research and experimentation.

501 Graduate Problems in Art History (3) Fall, Spring
Prerequisites: Graduate standing, six units in area of art history, or consent of instructor. Independent research into the evolution of an idea, philosophy or art form. Periodic group presentations and critical analysis.

502Y-Z Graduate Problems in Crafts (3-3) Fall, Spring
Prerequisites: Graduate standing. Six units of crafts, four in a specific area, or consent of instructor. Individual investigation in a specific area of crafts. Advanced work in laboratory and research under a specialist in the field.

503Y-Z Graduate Problems in Design (3-3) Fall, Spring
Prerequisites: Graduate standing. Six units of design, or consent of instructor. Independent and interdependent library and laboratory research into problems of contemporary design permitting student to pursue his special interests in advanced areas.

504Y-Z Graduate Problems in Representation (3-3) Fall, Spring
Prerequisites: Graduate standing. Eight units in area of representation, or consent of the instructor. Independent laboratory development in a given approach to painting, graphics, and sculpture. Development of individuality and depth in work is encouraged. Periodic group analysis.

531 Seminar in Art (3) Fall, Spring
Prerequisites: Graduate standing. Upper division art core requirements or equivalent, or consent of instructor. Individual research on special problems in the field of art.

599 Graduate Project (3)

AUDIOLOGY

(In the Division of Education)

STAFF: Jeffers, Kinstler.

In the fall of 1957, the major in audiology was discontinued. The functions served by this major are continued in conjunction with the program in hearing offered by the Department of Special Education. Some of the courses which were formerly part of the audiology major have been reorganized retitled, and classified with Special Education. Other courses, retaining their audiology letter and classification, appear in this section.

Courses in audiology and related courses in hearing listed in the Division of Education are designed to serve speech and hearing therapists, teachers of the deaf, and other professional personnel working in the field of hearing.

Nurses or teachers interested in satisfying the requirement for the public school audiometrist certificate should elect Education 427—Hearing and Its Measurement.

COURSES OF INSTRUCTION

429W-X-Y-Z Clinical Practice in Aural Rehabilitation (2-2-2-2)

Prerequisites: Education 427, 428, and 420, or consent of instructor. Supervised clinical experience in rehabilitation techniques with children and adults who have hearing losses.

441W-X-Y-Z Clinical Practice in Hearing Evaluation (2-2-2-2)

Prerequisites: Education 427, 428, and 420, or consent of instructor. Supervised clinical experience in diagnostic hearing evaluation and hearing aid selection.

Hearing and Its Measurement. See Education 427.

Speech Audiometry and Aural Rehabilitation. See Education 428.

Speech Reading. See Education 420.

GRADUATE COURSES

511 Advanced Audiology (3)

Prerequisites: Education 427 and 428 or consent of instructor. Instruction and practice in advanced audiometric techniques, including difference limen testing, delayed feedback, and P. G. S. R. Problems of noise in industry, psychogenic overlay, malingering, and relation of audiometric configuration to medical diagnosis.

529X-Y-Z Advanced Clinical Practice in Aural Rehabilitation (1-3)

Prerequisites: Education 427, Speech 438Y, Audiology 429W, or consent of instructor.

540 Audiological Instrumentation (3)

Prerequisites: Education 427 and 428 or consent of instructor. Physical characteristics of hearing aids; relation of these characteristics to fitting of hearing aids; study of current models with emphasis on instrument adjustment. Desirable electro-acoustic characteristics of auditory training and speech audiometry units.

541X-Y-Z Advanced Clinical Practice in Hearing Evaluation (1-3)

Prerequisites: Audiology 441 or consent of instructor.

Seminar in Hearing. See Education 536.

BIOLOGICAL SCIENCES

(In the Division of Science and Mathematics)

STAFF: Anderson (Co-ordinator), Bair, Griesel, Harvey, Hovanitz, LaDochy, Lowrie, Ross, Sacher, Straw, Vance, Welsh. *Part-time:* Highby.

BACHELOR'S DEGREE CURRICULA

Two major programs leading to the general secondary credential in Life Science—General Science are available in the biological sciences. These are:

1. A teaching major in Biological Science with an accompanying minor in Physical Science.
2. A teaching major in Biological Science with a separate minor outside the science field.

A teaching minor in Biological Science is also offered.

Professional education requirements for the above majors and the minor are shown on pages 132-135.

General Secondary Teaching Major in Biological Science

(With accompanying minor in Physical Science)

This program is designed to provide the prospective teacher of secondary school biological science with (a) a strong background in basic botany, microbiology, and zoology; genetics; animal physiology; plant classification; and related fields; (b) training in chemistry and physics adequate for teaching physical sciences; (c) sufficient depth in the biological sciences for entrance into a graduate biology program or unior college teaching.

Lower Division

Botany 100—General Botany	5 units
Microbiology 200—General Microbiology	5 units
Zoology 100—General Zoology	5 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Geology 101—Physical Geology	4 units
Mathematics 100—Basic Mathematical Analysis	4 units
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units

Upper Division

Biological Science 410—Genetics	3 units
Botany 440—Plant Classification	4 units
Zoology 430—Animal Physiology	4 units
Select *one* of the following	3-4 units
Biological Science 460—General Ecology (4)	
Nature Study 461—Nature in California (3)	

Select *one* of the following .... 3-4 units
- Biological Science 420—Histological Methods (3)
- Biological Science 421—Cytology (4)
- Nature Study 381—Science Materials (3)

Select *one* of the following .... 3-4 units
- Botany 401—Economic Plants (3)
- Botany 420—Morphology of Vascular Plants (4)
- Botany 421—Morphology of Nonvascular Plants (4)
- Botany 422—Plant Anatomy (4)
- Botany 425—Mycology (4)
- Botany 430—Plant Physiology (4)
- Botany 460—Plant Geography (3)

Select *one* of the following .... 3-4 units
- Zoology 423—Comparative Anatomy (4)
- Zoology 424—Embryology (4)
- Zoology 443—Cold-blooded Vertebrates (3)
- Zoology 444-445—Birds of California (2-2)
- Zoology 446—Mammalogy (4)

Select *one* of the following .... 3-4 units
- Zoology 440—Invertebrate Zoology (4)
- Zoology 441—Entomology (4)
- Zoology 447—Marine Zoology (3)

Chemistry 401A—Organic Chemistry (3) *or*
Physics 401—Modern Physics .... 3 units

70-75 units

SUGGESTED COURSE SEQUENCE FOR GENERAL SECONDARY TEACHING MAJOR IN BIOLOGICAL SCIENCE

(With accompanying minor in Physical Science)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Bot. 100—Gen. Botany *or* Zool. 100—Gen. Zoology	5	Bot. 100—Gen. Botany *or* Zool. 100—Gen. Zoology	5
Chem. 101—Gen. Chem.	5	Chem. 102—Gen. Chem.	5
Math. 100—Basic Math. Anal.	4	*Engl. 150—Written Expr. *or* Lang. Arts 150A	3
Phys. Educ. 150	1	Govt. 150—Govt. and Am. Soc.	3

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
Micro. 200—Gen. Micro.	5	Geol. 101—Phys. Geol.	4
Physics 101—Physics I	4	Physics 102—Physics II	4
*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3	Art 150—Art, Dance, Music	3
Psych. 150—Human Behavior	3	Phil. 150—Phil. Ideas	3
Phys. Educ. elective	1	H&S 350—Personal Health	2

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Chem. 401A—Org. Chem. *or* Physics 401—Modern Physics	3	Bot. 440—Plant Class.	4
Zoology elective	4	Bio. Sci. electives	3–4
Hist. 250—U. S. History	3	Gen. Educ. elective	3
Engl. 250—Underst. Lit.	3	Educ. 413—Psych. and Soc.	5
Gen. Educ. elective	3		
Educ. 300—Intro. Cred. Prog.	N. Cr.		

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* See "Note" on page 55.

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Bio. Sci. 410—Genetics	3	Bio. Sci. 460—Gen. Ecol. *or* N. S. 461—Nature in Calif.	3–4
Gen. Educ. Soc. Sci. elective	3	Zool. 430—Animal Physio.	4
Educ. 471—Sec. Educ.	5	Educ. 493—Methods	2
Educ. 493—Methods	2	Electives	5–6
Electives	2		

GRADUATE YEAR

Botany electives	3–4	Zoology elective	3
Educ. 443—Directed Teach.	3	Educ. 443—Directed Teach.	3
Educ. 444Y—Problems Sec.	1	Educ. 444Z—Problems Sec.	2
Educ. 480—Counsel & Guid.	2	Educ. 490—Audio-Vis.	2
Electives	5–6	Electives	5

NOTE: When a student has completed lower division requirements plus a minimum of 24 units in upper division courses in the biological sciences, a B.A. degree in biological science will be awarded if all other graduation requirements have been met. The graduate year must include 6 units of biological or physical sciences in the 400 series.

General Secondary Teaching Major in Biological Science

(Minor to be taken outside the science field)

This program is designed for students with a primary interest in the biological sciences but who do not desire a minor in the physical science field. It aims to develop a strong background in biological sciences while including only the necessary basic courses in the physical sciences.

Lower Division

Botany 100—General Botany	5 units
Microbiology 200—General Microbiology	5 units
Zoology 100—General Zoology	5 units
Chemistry 101—General Chemistry	5 units
Mathematics 100—Basic Mathematical Analysis	0–4 units*
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units

Upper Division

Biological Science 410—Genetics	3 units
Botany 440—Plant Classification	4 units
Zoology 430—Animal Physiology	4 units
Select *one* of the following	3–4 units
Biological Science 460—General Ecology (4)	
Nature Study 461—Nature in California (3)	
Select *one* of the following	3–4 units
Botany 401—Economic Plants (3)	
Botany 420—Morphology of Vascular Plants (4)	
Botany 421—Morphology of Nonvascular Plants (4)	
Botany 422—Plant Anatomy (4)	
Botany 425—Mycology (4)	
Botany 430—Plant Physiology (4)	
Botany 460—Plant Geography (3)	
Select *one* of the following	3–4 units
Zoology 423—Comparative Anatomy (4)	
Zoology 424—Embryology (4)	
Zoology 443—Cold-blooded Vertebrates (3)	
Zoology 444-445—Birds of California (2-2)	
Zoology 446—Mammalogy (4)	

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* May be met by a high school background which is certified as adequate by the Department of Mathematics.

Select *one* of the following .... 3–4 units
Zoology 440—Invertebrate Zoology (4)
Zoology 441—Entomology (4)
Zoology 447—Marine Zoology (3)

51–59 units

SUGGESTED COURSE SEQUENCE FOR GENERAL SECONDARY TEACHING MAJOR IN BIOLOGICAL SCIENCE

(Minor to be taken outside the science field)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Unit*
Bot. 100—Gen. Botany *or* Zool. 100—Gen. Zoology	5	Zool. 100—Gen. Zoology *or* Bot. 100—Gen. Botany	5
Chem. 101—Gen. Chem.	5	**Engl. 150—Written Expr. *or* Lang. Arts 150A	3
Math. 100—Basic Math. Anal.	4	Govt. 150—Govt. and Am. Soc.	3
Phys. Educ. 150	1	Psych. 150—Human Behavior	3
		Elective	2

SOPHOMORE YEAR

Micro. 200—Gen. Micro.	5	Physics 102—Physics II	4
Physics 101—Physics I	4	Art 150—Art, Dance, Music	3
**Sp. 150—Oral Expr. *or* Lang. Arts 150B	3	Hist. 250—U. S. History	3
Phil. 150—Phil. Ideas	3	H. & S. 350—Personal Health	2
Phys. Educ. elective	1	Minor	4

JUNIOR YEAR

Zoology elective	4	Bot. 440—Plant Class.	4
Engl. 250—Underst. Lit.	3	Gen. Educ. elective	3
Gen. Educ. Soc. Sci. elective	3	Educ. 413—Psych. and Soc.	5
Gen. Educ. elective	3	Minor	4
Educ. 300—Intro. Cred. Prog.	N.Cr.		
Minor	3		

SENIOR YEAR

Bio. Sci. 410—Genetics	3	Bio. Sci. 460—Gen. Ecol. *or* N. S. 461—Nature in Calif.	3–4
Educ. 471—Sec. Educ.	5	Zool. 430—Animal Physio.	4
Educ. 493—Methods	2	Educ. 493—Methods	2
* Botany electives	3–4	* Zoology electives	3–4
Minor	2–3	Minor	2–3

GRADUATE YEAR

Educ. 443—Directed Teach.	3	Educ. 443—Directed Teach.	3
Educ. 444Y—Problems Sec.	1	Educ. 444Z—Problems Sec.	2
Educ. 480—Counsel. and Guid.	2	Educ. 490—Audio-Vis.	2
Minor	3	Minor	3
Electives	5	Electives	3

NOTE: When a student has completed lower division requirements plus a minimum of 24 units in upper division courses in the biological sciences, a B.A. degree in Biological Science will be awarded if all other graduation requirements have been met. The graduate year must include 6 units of minor courses in the 400 series.

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* Six to seven units are required from these elective groups.
** See "Note" on page 55.

General Secondary Teaching Minor in Biological Science

See also pages 132-135 for professional education requirements. A teaching major in a different teaching field is also required.

Lower Division

Botany 100—General Botany *or* Microbiology 200—General Microbiology	5 units
[*] Zoology 100—General Zoology	5 units
[†] Mathematics 100—Basic Mathematical Analysis	4 units
Chemistry 101—General Chemistry	5 units

Upper Division

Biological Science Courses selected with the approval of adviser	7–8 units
	26–27 units

MASTER OF ARTS DEGREE

The graduate program is built on a broad foundation of undergraduate preparation in the biological sciences and is primarily designed to provide an opportunity for secondary teachers to become more adequately trained. The program requires intensive directed study aimed at breadth of information and depth of understanding.

1. Prerequisite: Bachelor of arts degree in General Secondary Teaching in Life Science and General Science or the equivalent.	
2. Area of concentration:	
a. Biological Science 501	3 units
b. Biological Science 599	3 units
c. Electives chosen from "500" courses	6 units
3. Approved courses outside the field of biological sciences	6 units
4. Other courses approved in advance by an adviser	12 units

NOTE: The master's program in biological sciences is currently being revised. The student should formulate his program with the aid of an adviser.

COURSES OF INSTRUCTION

Anatomy

201 Structure of the Human Body (3) Fall, Spring

Prerequisite: Biology 153 or Zoology 100 recommended. Lectures, demonstrations and selected experiments illustrating the structural units of the human body including cell, tissue, organ and organ system relationship. Lecture two hours; laboratory three hours.

Biological Science

153 Principles of Biology I (3) (General Education) Fall, Spring

Selected topics in the biological sciences as applied to the understanding of basic and unifying principles.

154 Principles of Biology II (3) (General Education) Fall, Spring

Prerequisite: Biology 153. Emphasis on the mechanisms of environmental and community biology.

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[*] Physical Education and Nursing Majors may substitute Anatomy 201—Structure of the Human Body (3) *and* Physiology 201—Introduction to Human Physiology (3) (total 6 units) for Zoology 100.

[†] May be satisfied by examination and/or four years of high school mathematics.

410 Genetics (3) Fall, Spring
Prerequisites: Zoology 100, Botany 100, or equivalent. Principles of the genetics of animals and plants emphasizing the mechanisms of inheritance and the practical applications.

411 Heredity and Evolution (3) Fall
Prerequisites: Botany 100 and Zoology 100, or the equivalent. Organic evolution, with critical discussion of possible mechanisms involved.

420 Histological Methods (3) Fall
Prerequisite: Zoology 100, Botany 100, or the equivalent. Practical experience in preparing and staining various types of tissue sections. Lecture one hour; laboratory six hours.

421 Cytology (4) Fall
Prerequisites: Botany 100 and Zoology 100, or the equivalent. Study of cellular structure, organization, and reproduction. Lecture two hours; laboratory six hours.

460 General Ecology (4) Spring
Prerequisites: Botany 100 and Zoology 100, or equivalent and Chemistry 101. Study of the relation of plants and animals to their environment and to each other. Emphasizes environmental complexes, ecological life histories, relationships between individuals in populations and communities. Field work stresses local conditions. Lecture two hours; laboratory and/or field work six hours.

GRADUATE COURSES

501 Development of Biological Concepts (3)
Prerequisites: Graduate status with bachelor's training meeeting requirements for the life science and general science teaching major. The great concepts in biological science, their development, their impact on human thought and activities, and their relation to present-day understandings.

510 Human Genetics (2)
Prerequisite: Biological Science 410 or equivalent. Problems, theories, and methods peculiar to human genetics; genetic counseling; inheritance of such traits as disease entities, mental retardation, and biochemical factors. Lecture one hour; laboratory three hours.

599 Graduate Project (3) Fall, Spring

Conservation

354 Conservation of Natural Resources (3) (General Education)
Physical and biological factors involved in the depletion of natural resources of the United States, such as soil, water, minerals, and forests. The need for and application of conservation practices. (Not accepted for majors and minors in science.)

61 Conservation of Wildlife (3) Spring
Open only to qualified majors and minors in the biological and physical sciences. Basic environmental needs of wildlife, value of wildlife to humans, methods involved in conservation of this resource, current problems.

Nature Study

55 Natural Science and California Culture (3) (General Education)
Prerequisite: Biological Science 153, or equivalent. Environmental tudy orienting and enriching individuals in their relationships to their living and physical world; cultural and scientific resultants of the limate and terrain; far-ranging field studies. Lecture two hours; laboratory three hours.

66 Regional Excursions (1-4) Fall, Spring
Extended field excursions during vacation periods to various regions uch as deserts, mountains, seashores of the United States, Canada, and Mexico for the study of the natural history of these regions. No prerequisites. Enrollment by permission of instructors only

67 Marine and Shore Life (3) Fall
Observation and study of life along bays, shores, and pools. Maintenance of small tanks of live specimens in the laboratory. Preparation nd display of specimens. Lecture one hour; laboratory six hours, including Saturday.

81 Science Materials (3) Spring
Collection, preservation, manufacture, exhibit, and use of science materials, including the maintenance of living things. Lecture two hours; laboratory three hours.

461 Nature in California (3) Spring
Prerequisite: Course in biological science or Nature Study 355. Scien-ific acquaintance with birds, mammals, and native vegetation; labora-ory study, field trips through Southern California. Lecture two hours; laboratory three hours; field trips to be arranged.

Physiology

201 Introduction to Human Physiology (3) Fall, Spring
Prerequisite: Anatomy 201, Biology 153 or Zoology 100 recommended. Basic principles of the function of living things with special emphasis upon the human body. Lecture two hours; laboratory three hours.

BOTANY

(In the Division of Science and Mathematics)

STAFF: Griesel (Department Head), Harvey, Sacher, Straw

BACHELOR'S DEGREE CURRICULUM

Major in Botany

The program in botany is designed to provide the student with broad understanding of the basic plant sciences. Such training wil qualify the student for (a) graduate study, (b) teaching in the are of biological sciences, especially at the junior college level, (c) applie botanical fields in civil service such as federal and state positions in par and forestry services, (d) applied botanical fields in private industr stressing horticulture and agriculture.

Lower Division

Botany 100—General Botany	5 unit
Chemistry 101—General Chemistry	5 unit
Mathematics 100—Basic Mathematical Analysis	4 unit
Physics 101—Physics I	4 unit
Physics 102—Physics II	4 unit
Zoology 100—General Zoology	5 unit

Upper Division

Biological Science 410—Genetics	3 unit
Botany 420—Morphology of Nonvascular Plants *or* Botany 421—Morphology of Vascular Plants	4 unit
Botany 422—Plant Anatomy	4 unit
Botany 430—Plant Physiology	4 unit
Botany 440—Plant Classification	4 unit
Chemistry 401A—Organic Chemistry	3 unit
Three courses from the biological sciences selected with the approval of an adviser	9–12 unit
	58 unit

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR BOTANY MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Unit*
Bot. 100—Gen. Botany *or* Zool. 100—Gen. Zoology	5	Bot. 100—Gen. Botany *or* Zool. 100—Gen. Zoology	5
Chem. 101—Gen. Chem.	5	Math. 100—Basic Math. Anal.	4
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Govt. 150—Govt. & Am. Soc.	3	Art 150—Art, Music, Dance	3
		Phys. Educ. 150	1

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* See "Note" on page 55.

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
hysics 101—Physics I	4	Physics 102—Physics II	4
hem. 401A—Org. Chem.	3	Hist. 250—U. S. History	3
hil. 150—Phil. Ideas	3	Engl. 250—Underst. Lit.	3
hys. Educ. elective	1	Psych. 150—Human Behavior	3
en. Educ. Soc. Sci. elective	3	Elective	3
lective	2		

JUNIOR YEAR

ot. 422—Plant Anat.	4	Bot. 440—Plant Class.	4
I&S 350—Personal Health	2	Bot. 420—Vascular Plants *or* Bot. 421—Nonvascular Plts.	4
lectives	9	General Educ. elective	3
		Electives	4

SENIOR YEAR

ot. 430—Plant Physio.	4	Bio. Sci. electives	6–8
io. Sci. 410—Genetics	3	General Educ. elective	3
io. Sci. elective	3–4	Electives	4–6
lectives	4–5		

COURSES OF INSTRUCTION

100 General Botany (5)

Introduction to the study of botany. Structure and function of vascular plants, principles of heredity and evolution of plants, and survey of nonvascular and vascular plants. Lecture three hours; laboratory six hours.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 Economic Plants (3) Spring

Prerequisite: Botany 100. Study of man's use of plants; origin of cultivated plants and their relation to human cultures.

420 Morphology of Nonvascular Plants (4) Spring 1960

Prerequisite: Botany 100. Life histories, structure, and evolutionary relationships of the principal orders of algae, fungi, and mosses. Lecture two hours; laboratory six hours.

421 Morphology of Vascular Plants (4) Spring 1961

Prerequisite: Botany 100. Comparative morphology and reproduction of ferns, fern allies, and seed plants. Lecture two hours; laboratory six hours.

422 Plant Anatomy (4) Fall

Prerequisite: Botany 100. Microscopic structure of vascular plants; emphasis on the comparative structure and functioning of meristems; structure and differentiation of cells and tissues; development and comparative anatomy of stem, leaf, and root. Lecture two hours; laboratory six hours.

425 Mycology (4) Fall
Prerequisite: Botany 100. Structure, development, physiology, and classification of representative genera and species of fungi, and the place of fungi in the world of life. Lecture two hours; laboratory six hours.

430 Plant Physiology (4) Fall
Prerequisite: Botany 100. Functions of plants; acquisition of raw materials and energy, manufacture of food and other substances, water relations, respiration, and growth. Lecture two hours; laboratory six hours.

440 Plant Classification (4) Spring
Prerequisite: Botany 100. Classification of flowering plants. Information about local native and cultivated plants of special value to the teacher of biology and nature study. Lecture two hours, laboratory and/or fieldwork six hours.

460 Plant Geography (3) Fall
Prerequisite: Botany 100. Botany 440 recommended. Flora of the world with emphasis on principles and problems of their development. Local flora and conditions stressed.

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

560 Plant Ecology (2) Spring
Bachelor's degree in botany, zoology, or biological sciences, including Biological Science 460 and Botany 440. Analysis of plant communities for descriptive, successional and evolutionary studies; interrelationships between different communities; and relationships among members of the community. Lecture one hour, laboratory and/or field work three hours.

BUSINESS ADMINISTRATION

(In the Division of Business and Economics)

TAFF: F. Simpson (Division Chairman), Allen, Allison, Bertram, Bray, Bright, Caplan, Chapin, Chen, Cobb, Codner, Courtney, Cox, Deitz, DeReyna, Dodge, Fiekowsky, Francis, Fjeld, Flippo, Green, Gustafson, Hanes, Hein, Hill, Horwich, Hoyt, Jenkins, Jones, McCarty, McLaren, Mathy, Moore, Murphy, Nelson, Norby, Ray, Scoles, Severance, W. Simpson, Sorrensen, Stroberg, Tipton, Tuohino, Voris, Whiting, Worley, Wu. *Part-time:* Borders, Bowman, Brown, Canfield, Elliott, Ewart, Facto, Horton, Norrbom, O'Donnell, Stine, Stout.

BACHELOR'S DEGREE CURRICULA

hree baccalaureate majors in business are offered:

(1) Business Administration (B.S. degree)
(2) Printing-Management (B.S. degree)
(3) Business Education (B.A. degree)

See page 53 for additional graduate requirements for B.S. degree.

I. Business Administration

All business-administration majors must take a common core of lower nd upper division courses. In addition, each student must select one of he following options: accounting; business-arts; business economics and tatistics; finance; administrative, industrial, purchasing, or small busiess management; labor relations and personnel; marketing; office administration; real estate; special business; or transportation or foreign rade. A total of 128 units is required for the B.S. degree in business dministration.

ower Division Core Requirements†

Mathematics 240—Introductory Mathematical Analysis for Business	3 units
Business 200AB—Principles of Accounting	6 units
Business 291—Quantitative Methods in Business and Economics‡	3 units
Economics 201—Introduction to Economic Analysis*	3 units

Upper Division Core Requirements

a. To be completed in the junior year:
  Business 300—Managerial Accounting (3)
  Business 306—Production Management (3)
    (Students taking office administration option will substitute Business 313—Office Organization and Management—For Business 306.)
  Business 309—Applied Business and Economic Statistics I (3)
  Economics 303—Money, Banking and the Economy (3)

A second semester of principles of economics is recommended.

Credit for Lower Division Terminal Courses in Business: Unit credit for course work carrying a business number taken in lower division will be granted toward any major foundation in business under the following conditions:

1. A maximum of 18 units (including two semesters of accounting and 3 units of business law in the lower division requirements) will be allowed, with the approval of the instructor in that field, if a grade of "C" or higher was received.
2. In no case will more than 6 units or two semesters of course credit be allowed in any one field (i.e., accounting, finance, management, marketing or industrial relations.)
3. Unit credit so secured in no way reduces the number of upper division units to be taken in the Division of Business and Economics.

All transfer students must have the approval of LASC adviser for the equivalent of this course.

b. To be completed in the junior or senior year:
  Business 303—Business Finance (3)
  Business 304—Principles of Marketing (3)
  Business 307—Manpower Relations in Business (3)
  Business 308—Law of Commerce (5)*
  Economics 310—Economics of the Business Firm (3)

c. All business majors are required to take a proficiency test in the use of bus ness machines not later than the end of the second semester in residence. Th requirement can be met by taking Business 212 (Business Machines), or b passing the machine-skill test given in Business 309.

OPTION 1—ACCOUNTING

Develops the technical and professional theories and procedure essential for the certified public accountant, the public accountan the business accountant, the government accountant, or the teacher o accounting.

ADVISERS:
Bray, Chapin, Chen, Cobb, deReyna, Francis, Hein, Horwich, Jenkins, Jone McLaren, Murphy, Ray, Tuohino.

Core requirements. See page 93	29 unit
Business 320AB, 321, 420, 422, and 424A	18 unit

OPTION 2—BUSINESS-ARTS

Meets the needs of firms desiring business graduates with less special ization. May also be used by students who wish a broader field o concentration at the undergraduate level. Couples the basic busines sequence with liberal arts courses.

ADVISERS:
Caplan, Hoyt.

Core requirements. See page 93	29 unit
English 306, Speech 411, Government 440, History 476	12 units
Additional course selected with the prior approval of an adviser	3 units

OPTION 3—BUSINESS ECONOMICS AND STATISTICS

Equips the student with the major tools of quantitative analysi needed as a business statistician in the rapidly expanding researc departments of business firms or as an executive assistant in moderate sized and large firms.

ADVISER:
Moore.

Core requirements. See page 93	29 unit
Business 409, Business 422, Economics 411, and either Business 446 or 467	12 uni
Additional course selected with the prior approval of an adviser	3 uni

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* Those students who have taken three semester units of business law in the lower division are take Business 305. Students who have taken 6 semester units of business law in lower divisic are to take Business 480.

† May not be applied toward general education requirement of the college.

OPTION 4—FINANCE

Prepares the student to enter business as a trained worker in the finance department, or as a specialist in banking, insurance, and investments, or as a research analyst or budget specialist.

ADVISERS:
Cox, Hill, Nelson, Scoles.

Core requirements. See page 93	29 units
Business 332, Business 433, Business 434	9 units
Two additional courses selected with the prior approval of an adviser	6 units

OPTION 5—MANAGEMENT

Business management has been divided into a number of specialties. The student may choose from among the following in the management option:

(A) Administrative
(B) Labor Relations and Personnel
(C) Production
(D) Purchasing
(E) Small Business

A. Administrative

Develops skill in administrative and supervisory techniques which are required of managers, supervisors, and similar administrative officers n the fields of industry, finance, government, labor, etc.

ADVISERS:
Allison, Flippo, Hanes, McCarty, Whiting, Worley.

Core requirements. See page 93	29 units
Business 360, Business 461, Business 471, and Business 473	12 units
Additional course selected with the prior approval of adviser	3 units

B. Labor Relations and Personnel

Develops skill in personnel relations that is required of managers, upervisors, conciliators, and similar officials in industry, finance, education, government, or labor unions.

ADVISERS:
Flippo, Norby.

Core requirements. See page 93	29 units
Those students with interests in *labor relations* take:	
Economics 302, Economics 420, Business 472, and Business 473	12 units
Additional course selected with the prior approval of adviser	3 units
Those students with interests in *personnel management* take:	
Economics 302, Business 360, Business 472, and Business 473	12 units
Additional course selected with the prior approval of adviser	3 units

C. Production

Prepares students for factory employment in production control, time nd motion study, methods analysis, and related assignments.

ADVISERS:
Allison, Voris.

Core requirements. See page 93	29 units
Business 360, Business 461, Business 463, and Business 464	12 units
Additional course selected with the prior approval of adviser	3 units

D. Purchasing

Prepares the student for employment in the field of purchasing. Stresses the role of the purchasing executive in business and the relationship of purchasing to other business functions.

ADVISERS:
Flippo, Whiting.

Core requirements. See page 93	29 units
Business 360, 365, 464, and 465	12 units
Additional course selected with the prior approval of adviser	3 units

E. Small Business

Prepares the student for the ownership and/or management of a small business in industry, finance, retailing, wholesaling, etc. Stresses the various functions which must be co-ordinated in a small business.

ADVISER:
Whiting.

Core requirements. See page 93	29 units
Business 330, 341, 468, and 471	12 units
Additional course selected with the prior approval of adviser	3 units

OPTION 6—MARKETING

Marketing is divided into a number of specialties. Students may choose from the following in the marketing option:

(A) Advertising
(B) Foreign Trade
(C) Marketing Management and Research
(D) Retailing

A. Advertising

Prepares the student for a career in an advertising agency, an advertising department, or in public relations.

ADVISERS:
Allen, Codner, Courtney, Dodge.

Core requirements. See page 93	29 units
Business 340, 440, 445, and 446	12 units
Additional course selected with the prior approval of adviser	3 units

B. Foreign Trade

Prepares the student for employment with firms engaged in importing, exporting, or transportation.

ADVISER:
Codner.

Core requirements. See page 93	29 units
Business 343, 442, 447, and Economics 406	12 units
Additional course selected with the prior approval of adviser	3 units

Down In the Valley

Bastien and Basti

OPERA WORKSHOP SCENES

Amahl and the Night Visitors

PHYSICAL EDUCATION

42
32
22
21

67
8

C. Marketing Management and Research

Prepares the student for a career in sales, sales management, and marketing management or marketing research.

ADVISERS:
Allen, Codner, Courtney, Dodge.

Core requirements. See page 93	29 units
Business 340, 442, 443, and 446	12 units
Additional course selected with the prior approval of adviser	3 units

D. Retailing

Prepares the student for employment by retail institutions or to own and operate his own retail store.

ADVISER:
Courtney.

Core requirements. See page 93	29 units
Business 340, 341, 443, and 444	12 units
Additional course selected with the prior approval of adviser	3 units

OPTION 7—OFFICE ADMINISTRATION

ADVISERS:
Deitz, Green, Gustafson, Stroberg.

Prepares students for office positions of responsibility, including secretarial assistance to business executives. (Adequate skill in shorthand and typewriting is required.)

Core requirements. See page 93	29 units
Business 212AB, 301, 310, and 311	12 units
Additional course selected with prior approval of adviser	3 units

OPTION 8—REAL ESTATE

Prepares students for entering the various areas of the real estate business or profession including brokerage and appraisal firms, lending institutions, and governmental agencies.

ADVISERS:
Caplan, Cox, Hill, Hoyt.

Core requirements. See page 93	29 units
Business 338, 381, 438, and 439	12 units
Additional course selected with the prior approval of an adviser	3 units

OPTION 9—SPECIAL BUSINESS

A flexible program designed for students with special and unique needs not covered by the other options. Permission to take this option must be secured from the chairman of the division.

ADVISER:
F. Simpson.

Core requirements. See page 93	29 units

Fifteen units in business, economics, and relevant fields to be worked out in conference with the division chairman and appropriate faculty members, depending upon the *unique* and *special* objectives of the student.

OPTION 10—TRANSPORTATION

Prepares a student for a position in various types of transportation enterprises.

ADVISERS:
Allen, Codner, Courtney, Dodge.

Core requirements. See page 93	29 units
Business 343, 444, 448, and 449	12 units
Additional course selected with prior approval of adviser	3 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR BUSINESS ADMINISTRATION MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
†Engl. 150—Written Expr. *or* Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. and Am. Soc.	3	Art 150—Art, Music, Dance	3
Phys. Educ. 150	1	Phys. Educ. elective	1
*Econ. 150—Econ. for Citizen	3	Electives	6
Elective	3		

SOPHOMORE YEAR

Phil. 150—Phil. Ideas	3	Engl. 250—Underst. Lit.	3
Bio. Sci. 154 *or* Phys. Sci. 152	3	Hist. 250—U. S. History	3
Psych. 150—Human Behavior	3	Econ. 201—Intro. to Econ. Anal.	3
Bus. 200A—Prin. of Acctg.	3	Bus. 200B—Prin. of Acctg.	3
Math. 240—Intro. Math. Anal.	3	Bus. 291—Quant. Methods	3

JUNIOR YEAR

Bus. 309—Applied Bus. and Econ. Stat. I	3	Econ. 303—Mon. Bank and Econ.	3
Bus. 300—Manag. Acctg.	3	Option requirements	6
Bus. 308—Law of Commerce	5	Math. 353—Gen. Educ. Math.	3
H. & S. 350—Personal Health	2	Bus. 306—Prod. Mgmt.	3
Elective	4	Elective	2

SENIOR YEAR

Bus. 303—Bus. Finance	3	Econ. 310—Econ. Bus. Firm	3
Bus. 304—Prin. of Mktg.	3	Option requirements	6
Bus. 307—Manpwr. Relations	3	Gen. Educ. elective	3
Option requirements	3	Electives	4
Elective	4		

II. Printing Management

The major presented below has been prepared to give the student an extensive training in the skills of a particular major industry, as well as a grasp of the principles and techniques of business management. The curriculum has been developed through close consultation with the graphic arts industry.

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* Recommended.

† See "Note" on page 55.

The lower division portion of the program is primarily concerned with the acquisition of skills and techniques of the printing industry. The upper division portion is primarily concerned with the business management phases. In addition every student meets the general education requirements of the college.

ADVISERS:

Flippo, Worley, Voris.

Lower Division Requirements

Business 200A, Business 200B and Economics 201	9 units
Consult Professor Hoffman in the Industrial Arts Department for required work in printing and related subjects.	

Upper Division Requirements

A. Accounting and Finance Courses	
Select either Business 300 or Business 303	3 units
B. Management Courses	
Business 306 and Business 479	6 units
Select one from the following: Business 313, 360, 468, or 471	3 units
C. Marketing Courses	
Select one from the following: Business 304, 330, or 341	3 units
D. Related Business and Economics Courses	
Business 308 * and Economics 302	8 units
Select two from the following: Business 309, Economics 303, or Economics 310	6 units
E. Graphic Arts Courses	
Industrial Arts 432A, 432B, and 433	9 units

Students who have not had work experience with a printing concern will be required to complete at least two units of Business 398.

III. Business Education

ADVISERS:

Deitz, Green, Gustafson, Stroberg.

This major is designed to provide the student with a broad understanding of the scope, development, and philosophy of business education; to stimulate his interest in the teaching profession; and to prepare him for successful teaching of the various business subjects offered in the secondary schools. Students who wish to qualify for the bachelor of arts degree should complete the requirements listed below for the business education teaching major.

A. Six months of practical experience or 1,000 clock hours in a business occupation.

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* Students who have taken three semester units of business law in junior college are to take Business 305. Students who have taken six units of business law in lower divison are to take Business 480.

B. Twenty-five semester hours of work in subjects basic to business and commerce which must include at least one course from each of the following fields:
  - Economics 150—Economics for the Citizen (3)
  - Business 102AB—Typewriting (2-2)
  - Business 200AB—Principles of Accounting (3-3)
  - Business 308—Law of Commerce (5); *or* business law taken in lower division
  - Business 113—Organization of American Business (3); *or* business organization and management taken in lower division
  - Business 301—Business Correspondence (3); *or* mathematics of accounting and finance or commercial algebra taken in lower division
  - Geography 240—Economic Geography (3); *or* consumer economics or consumer education
  - Business 304—Principles of Marketing (3); *or* salesmanship, retailing, or marketing taken in lower division.

C. Twenty semester hours of work in at least two of the following fields of concentration (a minimum of eight semester hours in each of the two fields, one of which must be accounting or secretarial training):

Accounting
  - Business 212A—Business Machines (2)
  - Business 320AB—Intermediate Accounting (3–3)
  - Electives:
    - Business 300—Managerial Accounting (3)
    - Business 420—Advanced Accounting (3)
    - Business 422—Industrial and Cost Accounting (3)

Secretarial Training
  - Business 212A—Business Machines (2)
  - * Business 310—Advanced Transcription Techniques (3)
  - † Business 311—Administrative Secretarial Procedures (3)
  - Electives:
    - Business 212B—Business Machines (1)
    - Business 301—Business Correspondence (3)

Merchandising
  - Business 304—Principles of Marketing (3)
  - Business 340—Principles of Advertising (3)
  - Business 341—Salesmanship (3)
  - Business 442—Sales Management (3)
  - Business 443—Retailing, Principles and Practices (3)

Business Management
  - Business 303—Business Finance (3)
  - Business 305—Business Law (3)
  - Business 309—Applied Business and Economic Statistics I (3)
  - Business 313—Office Organization and Management (3)
  - Business 335—Insurance Principles (3)
  - Business 338—Real Estate Principles (3)

NOTE: If any of the courses listed under "C" were taken as basic subjects under requirement "B," other courses under "C" must be substituted.

D. The scope and function of business education.

Education 491—Principles of Business Education (3)

All students in business education take this introductory course prior to methods and directed teaching. It may be taken concurrently with the *first* methods course in business education.

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* Adequate typing and shorthand skills are prerequisite to Business 310.

† Adequate typing skill is a prerequisite to Business 311.

Special Secondary Teaching Major; General Secondary Teaching Major and Minor

The special secondary teaching credential authorizes the holder to teach in elementary and secondary schools subjects basic to business and commerce and, in addition, the fields of concentration named in the credential. The requirements for the general secondary teaching credential are the same as those for the special secondary credential except for the addition of a minor in a different teaching field and a graduate year including further professional education. The minor consists of a minimum of 20 units of work in business administration and secretarial subjects; 12 units must be in upper division, including 6 units in the same subject field, i.e., accounting, secretarial training, merchandising, or business management. See also pages 132-135 for professional education requirements.

Note: Candidates for the special or general secondary credential, either majors or minors, must have completed Education 491 and at least one Education 493 methods course in business education prior to enrolling in directed teaching.

SUGGESTED COURSE SEQUENCE FOR BUSINESS EDUCATION MAJOR WITH SPECIAL SECONDARY CREDENTIAL

First semester	*Units*	*Second semester*	*Units*
FRESHMAN YEAR			
Eng. 150—Written Expr. *or* Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biol. *or* Phys. Sci. 151	3	Biol. Sci. 153—Prin. of Biol. *or* Phys. Sci. 151	3
Gov. 150—Gov. and Amer. Soc.	3	Art 150—Art, Music, Dance	3
P.E. 150—Phys. Educ.	1	P.E.—Phys. Educ. elective	1
Econ. 150—Econ. for the Citizen	3	Bus. 113—Organ. of Amer. Bus.	3
Bus. 120A—Typewriting	2	Bus. 102B—Typewriting	2
SOPHOMORE YEAR			
Phil. 150—Phil. Ideas	3	Eng. 250—Underst. Lit.	3
Biol. Sci. 154—Prin. of Biol. *or* Phys. Sci. 152	3	Hist. 250—U.S. History Geog. 240—Econ. Geog.	3 3
Psych. 150—Human Behavior	3	Bus. 212A—Bus. Machines	2
Bus. 200A—Prin. of Acctg.	3	Bus. 200B—Prin. of Acctg.	3
Bus. 103A—Shorthand (3) (for Sec. majors) *or* elective	3	Bus. 103B—Shorthand (3) (for Sec. majors) *or* elective	1
JUNIOR YEAR			
H.&S. 350—Personal Health	2	Ed. 471—Sec. Educ.	5
Gen. Ed. elective	3	Ed. 491—Prin. of Bus. Ed.	3
Ed. 413—Psych. and Soc.	5	Bus. 313—Office Org. and Mgmt.	3
Bus. 310—Adv. Trans. Tech. *or* Bus. 320A—Intermed. Acctg.	3	Bus. 311—Adm. Sec. Proced. *or* Bus. 320B—Intermed. Acctg.	3
Bus. 301—Bus. Correspondence	3	Ed. 493—Methods	2
Ed. 300—Intro. Cred. Prog.	N.Cr.		

See "Note" on page 55.

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Ed. 443Y—Directed Teach.	3	Ed. 443Z—Directed Teach.	3
Ed. 444Y—Problems Sec.	1	Ed. 444Z—Problems. Sec.	2
Ed. 493—Methods	2	Ed. 490—Audio-Vis.	2
Bus. 304—Prin. of Mktg.	3	* Approved Business electives	6
Bus. 305—Business Law	3	Electives	2
* Approved Business electives	3		

SUGGESTED COURSE SEQUENCE FOR BUSINESS EDUCATION MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
†Eng. 150—Written Expr. or Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biol. *or* Phys. Sci. 151	3	Biol. Sci. 153—Prin. of Biol. *or* Phys. Sci. 151	3
Gov. 150—Gov. and Amer. Soc.	3	Art 150—Art, Music, Dance	3
P.E. 150	1	P.E. elective	1
Econ. 150—Econ. for the Citizen	3	Bus. 113—Org. of Amer. Bus.	3
Bus. 102A—Typewriting	2	Bus. 102B—Typewriting	2

SOPHOMORE YEAR

Phil. 150—Phil. Ideas	3	Eng. 250—Underst. Lit.	3
Biol. Sci. 154—Prin. of Biol. *or* Phys. Sci. 152	3	Hist. 250—U.S. History	3
Psych. 150—Human Behavior	3	Geog. 240—Economic Geog.	3
Bus. 200A—Prin. of Acctg.	3	Bus. 200B—Prin. of Acctg.	3
Bus. 103A—Shorthand (for Sec. majors) *or* elective	3	Bus. 103B—Shorthand (for Sec. majors) *or* elective	3

JUNIOR YEAR

H.&S. 350—Personal Health	2	Gen. Ed. elective	3
Bus. 212B—Busines Machines	1	Ed. 413—Psych. and Soc.	5
Bus. 310—Adv. Trans. Tech. *or* Bus. 320A—Intermed. Acctg.	3	Bus. 311—Adm. Sec. Proced. or Bus. 320B—Intermed. Acctg.	3
Bus. 301—Bus. Correspondence	3	Bus. 313—Office Org. and Mgmt.	3
Bus. 304—Prin. of Mktg.	3	Minor	3
Minor	3		
Elective	1		
Ed. 300—Intro. Cred. Prog.	N.Cr.		

SENIOR YEAR

Ed. 471—Sec. Educ.	5	Ed. 493B—Methods (major)	2
Ed. 491—Prin. Bus. Ed.	3	Ed. 493—Methods (minor)	2
* Bus. 340—Prin. Advertis. *or* *Bus. 303—Bus. Finance	3	Bus. 305—Bus. Law	3
Minor	5	Minor	8

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* Students concentrating in the Merchandising field choose 9 units from: Bus. 340, 341, 442, 443; students concentrating in Business management field, take: Bus. 303, 335, 338.

† See "Note" on page 55.

GRADUATE YEAR

First semester	*Units*	*Second semester*	*Units*
Ed. 442Y—Directed Teach. (minor)	3	Ed. 442Z—Directed Teach. (major)	3
Ed. 444Y—Problems Sec. Teach.	1	Ed. 444Z—Problems Sec. Teach.	2
Ed. 490—Audio-Vis.	2	Ed. 480—Counsel and Guid.	2
[*] Approved Bus. electives	6	Electives	9
Minor	3		

SUGGESTED COURSES FOR BUSINESS EDUCATION MINOR

Lower Division

†Business 120 AB—Typewriting (2-2)
Business 103AB—Shorthand (Gregg) (3-3)
Business 113—Organization of American Business (3)
†Business 200 AB—Principles of Accounting (3-3)
†Business 212A—Business Machines (2); Business 212B—Business Machines (1)

Upper Division

Business 300—Managerial Accounting (3)
Business 301—Business Correspondence (3)
Business 303—Business Finance (3)
Business 310—Advanced Transcription Techniques (3)
Business 311—Administrative Secretarial Procedures (3)
Business 313—Office Organization and Management (3)

NOTE: Those students who have completed requirements for the special or general secondary major at another institution must complete at least seven units in business education courses, including one methods course, at Los Angeles State College before they may expect to obtain the department's recommendation for directed teaching.

MASTER OF SCIENCE DEGREE

Prerequisite for pursuing the master's degree: An undergraduate degree in business administration or economics from an accredited college or university. Students not meeting this prerequisite are required to take courses in Business Administration and Economics to remove these deficiencies before being admitted to the graduate program.

1. Core courses:
   (a) Business 501
   Administrative Practices and Human Relations—3 units.
   (b) Business 502
   Economic Analysis and Business Operations—3 units.
   (c) Business 503
   Quantitative Approach to Managerial Decisions—3 units.
2. Graduate Thesis. Business 599. 3 units.
3. Additional work selected in conference with the graduate adviser to meet the occupational objectives of the student in the field of accounting, finance, management, marketing, or business economics. 18 units. At least 6 units of these electives must be courses open only to graduate students.
4. Directed field experience or field study. 6 units. (This requirement may be waived for students with adequate prior experience in the occupational field. The adequacy of this prior experience will be determined by the department.)

Students concentrating in the Merchandising field choose 9 units from: Bus. 340, 341, 442, 443; students concentrating in the Business Management field take: Bus. 303, 335, 338.

[†] A minimum of one course in each is required.

COURSES OF INSTRUCTION

Business courses are numbered as follows:

Lower Division

101 to 291

Upper Division

Accounting 320-329; 420-429.
Finance 330-339; 430-439.
Marketing 340-349; 440-449.
Management 360-369; 460-469.
Labor Relations and Personnel 370-379; 470-479.
Law 480-489.
General
  Business 490-499.
Graduate
  Courses 500-599.

102AB Typewriting (2-2) Fall, Spring

Emphasis on correct typewriting techniques; skill improvement in speed and accuracy; tabulating and problem solving; business letters, business forms, manuscripts, and office reports. Class meets five hours a week.

103AB Shorthand (3-3) Fall, Spring

Ability to apply basic principles of Gregg shorthand to an extensive shorthand vocabulary; emphasis on speed and accuracy in reading and writing shorthand; development of skill in producing mailable typed manuscripts, business letters, and articles. Class meets five hours a week.

113 Organization of American Business (3) Fall, Spring

Scope, function, and organization of modern business; fundamental concepts, principles, and current practices in the major areas of business activity. (Not open to Business Administration and Economics majors.)

200A Principles of Accounting (3) Fall, Spring

Simple transactions, general ledger accounts, books of original entry, the closing process, trial balances, financial statements, controlling accounts, adjusting entries, and the voucher system.

200B Principles of Accounting (3) Fall, Spring

Prerequisite: Business 200A. Problems of current and fixed assets, inventory accounting, manufacturing operations, departmental accounts, branch accounts, installment sales, consignments, and analysis of financial statements.

291 Quantitative Methods in Business and Economics (3) Fall, Spring

Prerequisite: Mathematics 240 or equivalent. Introduction to a variety of optimization techniques used in business administration. Elements of quantitative decision theory applied to business problems. Annuities, with special application to interest cost of capital investments.

300 Managerial Accounting (3) Fall, Spring
Prerequisite: One year of accounting or Business 200AB. Applied course in accounting. Emphasis on use of accounting information in business decisions, the application of accounting techniques to business operation and control, and accounting for personal use.

301 Business Correspondence (3) Fall, Spring
Prerequisite: Adequate skill in typewriting. Training in composition of business letters; modern trends in business correspondence; problems of management which arise in connection with correspondence; evaluation of letters from representative firms. Practice in dictation of correspondence; writing of various forms of business letters.

303 Business Finance (3) Fall, Spring
Alternative forms of business organization; financial principles and practices related thereto; administration and dissolution of private business corporations; financial promotion, types of securities, expansion, consolidation, merger, and reorganization. Sources and uses of financial information.

304 Principles of Marketing (3) Fall, Spring
The organization and principal operating aspects of our system for distributing goods and services. Retail and wholesale distribution channels, consumer buying characteristics, pricing, marketing of industrial products, particularly purchasing and selling problems involved in industrial marketing and co-operative marketing of agricultural products. Sources and uses of marketing information.

305 Business Law (3) Fall, Spring
Prerequisite: Three semester units of Business Law. Agency, copartnership, corporations, and credit instruments; rights, duties and obligations arising out of relationship and business aspects thereof. Formation, operation, and termination of such relationships; law of commercial paper; bankruptcy; insolvency.

306 Production Management (3) Fall, Spring
The essentials of industrial organization and management. Primary departmentation; problems of supervision; authority and accountability; span of control; relationship of staff to line. Techniques of factory management, including plant layout, stores, tool, equipment and quality control; simplification and standardization. Sources and use of management information.

307 Manpower Relations in Business (3) Fall, Spring
Analysis of the techniques of stimulating co-operation in the business environment. Concentration on motivating forces, communication, individual relationships, group relationships, and training of supervisors. Principles will be discussed and analyzed by studying actual business situations.

308 Law of Commerce (5) Fall, Spring

Prerequisite: Upper division standing. Source of the Law; Courts and Court Procedure. Law of contracts, agency, partnerships, corporations, sales, negotiable instruments, property, securities, bankruptcy, and insolvency. Formation and elements, performance, breach and enforcement of contracts; formation, operation, and termination of agencies, partnerships, and corporations. Creation elements of commercial paper and credit instruments. Real and personal property and security transactions. Insolvency proceedings. Business and legal aspects; rights, duties and obligations arising from same.

309 Applied Business and Economic Statistics I (3) Fall, Spring

Prerequisite: Business 291 or consent of adviser. Statistical methods most used by business. Graphic and tabular presentation of data; variation; sampling theory with applications to marketing and industrial problems; business index numbers; time series analysis; trend, seasonal and business cycles, forecasting; simple correlation; basic operation of electric rotary calculators. Lecture three hours; laboratory two hours.

409 Applied Business and Economic Statistics II (3) Fall, Spring

Prerequisite: Business 309. Analysis of variance; multiple and partial correlation; recent advances in time-series analysis. Techniques of sample survey construction: stratification, multistage sampling, optimum allocation of resources. Estimates of various population characteristics from such samples.

OFFICE ADMINISTRATION

212A-B Business Machines (2-1) Fall, Spring

Learning, applying, planning, and supervising effective procedures, standards, and methods of measurement related to skills employed in the service functions of the modern office, including development of skill in the operation of various types of office computing machines; duplicating, dictating, and transcribing equipment. Class meets two hours a week for each unit of credit. (Bus. 212A meets the business machines proficiency requirement for all business majors and credential requirements for all business-education majors. Bus. 212A and Bus. 212B may be taken concurrently.) Prerequisite: Typing skill of 50 words a minute for Business 212B.

310 Advanced Transcription Techniques (3)

Prerequisites: Typing skill of 60 words a minute; shorthand skill of 90 words a minute. Stenographic office problems; development of transcription techniques; measurement of transcription skill. Emphasis on skill, knowledge, requirements, and standards for efficient stenographic procedures. Class meets four hours per week.

311 Administrative Secretarial Procedures (3)
Prerequisite: Adequate skill in typewriting. Develops secretarial techniques at a high professional level. The scope of a secretarial career; secretarial duties and responsibilities; effective office relations. Emphasis on office administration, correspondence, records organization and supervision; work simplification; legal records and business reports. Class meets four hours a week.

313 Office Organization and Management (3) Fall, Spring
Relation of the office to the business or industry; office organization, management, and functions; methods used in selecting and training office personnel; office layout and work flow; selection and care of equipment and supplies; simplification of systems and procedures; forms design and control. Case studies and field trips.

ACCOUNTING

320A Intermediate Accounting (3) Fall, Spring
Prerequisite: Business 200AB. Accounting theory, practice and problems relating to current assets, current liabilities and stockholders' equity.

320B Intermediate Accounting (3) Fall, Spring
Prerequisite: Business 320A. Accounting theory, practice and problems relating to noncurrent assets and noncurrent liabilities. Various analyses of financial statements. Contemporary accounting problems.

321 Federal Tax Accounting I (3) Fall, Spring
Prerequisite: Three semesters of accounting. Statutes, regulations, administrative rulings, and court decisions relative to the income taxes of individuals. Preparation of tax returns.

326 CPA Law Problems and Auditing (3) Spring
Prerequisites: Senior or graduate standing and consent of instructor. Intensive survey of law subjects, auditing standards and procedures covered by the CPA examination. Review of past CPA examination questions.

328 CPA Problems and Theory of Accounts I (3) Fall
Prerequisites: Senior or graduate standing and consent of instructor. Intensive survey of nonspecialized accounting problems and theory of CPA examination calibre. Review of past CPA examination problems and questions.

329 CPA Problems and Theory of Accounts II (3) Spring
Prerequisites: Senior or graduate standing and consent of instructor. Intensive survey of specialized accounting problems and theory of CPA examination calibre. Review of past CPA examination problems and questions.

420 Advanced Accounting (3) Fall, Spring
Prerequisites: Business 320AB. Advanced theory and accounting problems concerning partnerships, ventures, insurance, statement of affairs, receivership, branch accounts, foreign exchange, and estate accounting.

421 Federal Tax Accounting II (3) Fall, Spring
Prerequisite: Business 321. The statutes, regulations, administrative rulings, and court decisions relative to income taxes of partnerships and corporations. Preparation of tax returns.

422 Cost Accounting I (3) Fall, Spring
Prerequisite: Three semesters of accounting. Manufacturing accounting theory, problems, records and financial statements. Elements of job-order and process cost accounting. Special emphasis on managerial use of cost data.

423 Cost Accounting II (3) Fall (Offered 1960-61)
Prerequisite: Business 422. Theory and problems of the major types of cost systems in general use; emphasis on the development of standards for cost control.

424A Auditing I (3) Fall, Spring
Prerequisite: Business 320AB. Introduction to the theory and techniques of auditing. Audit programs, evidence and working papers. Elements of internal control, including the function of internal auditing. Verification of financial statements by the CPA.

424B Auditing II (3) Spring
Prerequisite: Business 424A. Verification of individual balance sheet and income statement accounts by the independent CPA. Application of statistics to audit sampling. Preparation of audit and accounting reports.

425 Corporation Accounting (2) Spring
Prerequisite: Business 420. Incorporation requirements affecting accounting procedure, corporate reports, mergers, amalgamations and consolidations, holding companies; principles underlying and preparation of consolidated balance sheets and income statements. CPA examination problems relative to corporations.

427 Municipal and Governmental Accounting (2) Fall
Prerequisite: Business 320AB. Accounting theory and problems of governmental and institutional units. Budgeting, tax levies, appropriations. Accounting for revenues and expenditures of various funds. Preparation of related financial statements.

428 (491) Accounting Systems (2) Fall
Prerequisite: Successful completion of 18 units of accounting and consent of instructor. Techniques involved in co-ordination, design, installation, and control of accounting systems. Special emphasis on the study of existing systems, and analysis of a business organization to de-

termine its particular requirements for a system. Installation of a system in local industry under instructor supervision is required of each student.

429 (493) **Problems of the Controller** (3) Fall, Spring
Prerequisites: Senior or graduate standing and consent of instructor. Survey of the responsibilities of the chief accounting officer. Accounting control of operations, effective methods of presenting accounting reports, and proper administration of the controller's department. Case studies.

FINANCE, REAL ESTATE AND INSURANCE

330 **Credits and Collections** (3) Fall
Business and social functions of credit; classifications of credit and credit instruments; investigation and analysis of credit risks; management and control of credit-collection processes.

332 **Investments** (3) Fall, Spring
Prerequisite: Business 303. Principles of investment, survey of corporate securities, basic risks of investment, individual and institutional programs, principles of investment analysis, and selection of stocks and bonds.

335 **Insurance Principles** (3) Fall, Spring
Insurance as an economic and business institution. Survey of fire, marine, casualty, and life insurance for those interested as potential consumers or as a career.

336 **Property Insurance** (3) Fall
Prerequisite: Business 335 or consent of instructor. Practices and principles of fire, ocean and inland marine, and related property insurance lines.

338 **Real Estate Principles** (3) Fall, Spring
Introduction to the economics of land ownership and use. Fundamentals of ownership, financing, appraisal, management and transfer of residential and other real property.

339 **Real Estate Practice** (3) Fall, Spring
Prerequisite: Business 338 or consent of instructor. Procedures, methods, standards, and ethics of the real estate business; emphasis upon the function of the broker and real estate selling.

431 **Business Fluctuations and Forecasting** (3) Fall, Spring
See Economics 435.

433 **Budgeting** (3) Fall, Spring
Prerequisite: Business 300. Modern practices and techniques involved in the formulation, enactment, and administration of the budget; relation of budget practices to accounting and scientific management in business and government; preparing the budget; sources for estimates; relation of performance to estimates; analysis and reports for budgetary control.

434 Financial Management (3) Fall, Spring
Prerequisites: Economics 303 and Business 303. Processes of procurement and disposition of the resources of business and financial institutions. Case problems in financing of industrials, utilities and railroads. Management of the funds of banks and other financial institutions.

435 Life Insurance (3) Spring (Offered 1960-61)
Economic and personal significance of life insurance; types of policies, contracts, premium determination, and reserves; insurance as an investment; group life, health and accident insurance.

436 Casualty Insurance (3) Spring
Prerequisite: Business 335 or consent of instructor. Practices and principles of workmen's compensation, liability insurance and other casualty lines.

437 Investment Analysis (3) Spring
Prerequisite: Business 332 or consent of instructor. Investment practice problems in analysis of financial statements; selection and valuation of stocks and fixed-income securities; stockholder-management relations; applied security analysis.

438 Real Estate Valuation (3) Fall, Spring
Prerequisite: Business 338 or consent of instructor. Determining real property values; purposes of appraisals; analysis of factors involved and their relationship to trends in property values; current appraisal theory.

439 Real Estate Finance (3) Spring
Prerequisite: Business 338 or consent of instructor. Position of real estate finance in the economy. Techniques and procedures used in financing real property, including sources of funds, lending policies, and instruments used in California today.

MARKETING

340 Principles of Advertising (3) Fall
Prerequisites: Business 304 or consent of instructor. What advertising is and what it is used for; its marketing and economic functions; advertising media, copy, layout, research. Printing and production processes; the organization of advertising departments and advertising agencies.

341 Salesmanship (3) Fall, Spring
Prerequisite: Business 304 or consent of instructor. Development and practical application of sales techniques in selected fields. Work of the salesman, including customer relationships, home office relationships, the evaluation of sales opportunities, and development of the sales canvass. Includes cases, discussions, demonstrations, and oral participation in sales presentations.

343 Principles of Transportation (3) Fall
Economic significance of rail, bus, truck, air, and inland waterway transportation. Problems of rate structures, regulation and finance of the transportation systems. Special emphasis on rail transport.

344 (443) Principles of Retailing (3)
Study of the nature and importance of retailing. Functions of buying, stock planning, inventory control, markup, accounting for stock control, pricing, style merchandising, advertising, and personnel. Stress is placed on store location, store layout, departmentization and management control.

440 Advanced Advertising (3) Spring (Offered 1960-61)
Prerequisite: Business 340 or consent of instructor. Preparation of advertisements for newspapers, magazines, and other printed media; effective advertising appeals, basic elements of good advertising for business concerns, headlines, slogans, etc. Importance of layouts, production and advertising budgets.

441 Industrial Marketing (3) Spring
Prerequisite: Business 304. Analysis of various types of industrial goods and markets for them; product planning and development; marketing research; determination of marketing channels; pricing policies; advertising; personal selling; cost distribution; selling to various governmental agencies.

442 Sales Management (3) Spring
Activities and organization of the sales department. Methods employed by sales managers in selecting, training, and supervising salesmen; selling methods, materials, and campaigns; distribution channels and territories; pricing, budgets, controls, and sales research. Lectures, cases, discussions, guest speakers, and exhibits.

443 Problems in Retailing (3)
Problems of management of a retail store. Problem and case approach; interrelationship of major elements of retailing, buying, pricing, stock control, planned stocks, merchandising, control, including expense accounting and financial management.

444 Wholesaling (3) Spring
Prerequisite: Business 341 or consent of instructor. Economics aspects of wholesaling, its growth and trends, especially since World War II, wholesaling functions in fields of agriculture, consumers goods, industrial goods, etc. The status of wholesaling in domestic and foreign trade; techniques and methods of order handling, warehousing, and stock control, credit management, wholesaling co-operatives, and governmental regulations. Wholesale customer relationships.

445 Public Relations Methods for Business (3) Spring (Offered 1961-62)

Prerequisite: Business 304. Public relations policies and techniques for business enterprises; development of good relationships with customer, employee, stockholder, government, and general public; importance of honesty and fairness in all public dealings; the place of research, advertising, sales promotion and publicity in public relations programs; uses of specific media.

446 Marketing Research Problems (3) Spring

Prerequisites: Business 309 and prior or current registration in Business 442 or consent of instructor. Practical sales and research problems with field investigations and reports covering application of the scientific method to the solution of sales problems. Problem analysis, collection of information from field observation, surveys, sales records, and secondary sources; the analysis and interpretation of data, and the preparation of reports.

447 Foreign Trade Practices (3) Fall (Offered 1960-61)

Prerequisite: Business 304. Techniques of foreign trade; exchange of goods; declarations; quotations; packing; shipping.

448 Traffic Management (3) Spring (Offered 1960-61)

Prerequisite: Business 343. Principles and practices of industrial traffic management including organization and operation of the traffic department, shipping documents, rate analysis and rate adjustment procedure, routing, tracing, expediting tariff supervision claims and claim prevention, procedure before regulatory commissions, traffic management and foreign trade, and traffic research.

449 Motor Transportation Practices (3) Fall (Offered 1960-61)

Prerequisite: Business 343 or consent of instructor. Intensive survey of motor carrier practices. Emphasis on both inter- and intra-city motor transportation problems, including the packaging of goods for shipment and warehousing.

See also Economics 406, Principles of International Trade.

INDUSTRIAL MANAGEMENT

360 Case Studies in Business Management (3) Fall, Spring

Prerequisite: Business 306 or equivalent. Detailed case studies of the techniques of factory management, factory organization, departmentation and its criteria. Problems of middle supervisory levels; authority and accountability; relationships of staff to line. Concepts of production planning.

362 Industrial Equipment and Processes (3) Fall, Spring

Prerequisite: Business 306 or consent of instructor. Physical aspects of industry, as distinguished from organizational and managerial aspects. Characteristics of general purpose machine tools and other industrial machinery; processes such as casting, forging, heat treating and welding. Characteristics of important materials of manufacture; the relation of equipment and operation to product. Background in physics and chemistry helpful, but not required.

365 Industrial Purchasing (3) Fall

Prerequisites: Business 306 and 308. Problems of purchasing raw materials, fabricated parts, standard supplies, machinery and industrial equipment. Quality control of purchases, industrial specifications and inspection. Analysis of economic purchase lots; quantitative determination of minimum lots; order points, competitive quotations and purchase contracts. Purchasing procedure and purchase record control. Government purchasing procedures.

369 Applications of Industrial Management (3) Fall
(Offered 1960-61)

Prerequisite: Business 360. Detailed analysis, by field survey and conference methods, of selected manufacturing plants. Preparation of analytical reports emphasizing problems of production and their relationship to finance and marketing. The interdependence of all parts of the organization and the need for unified management thinking.

461 Executive Control and Administration (3) Fall, Spring

Prerequisites: Business 306 and 360. Use of the case method to acquaint the student with major executive responsibilities and problems in various industries. Diagnosis of current problems and formulation of sound administrative policies and practices, requiring a consideration of sales, production, finance, and personnel factors.

463 Motion and Time Study (3) Spring

Prerequisites: Business 306, 309, and 360. Motion economy and elements of quantitative scientific management. Operation analysis, flow process charts, the division of activity into its normal elements. Time study procedures from raw data to final rating. Standardization, rating, and delay and fatigue influences; introduction to methods-time measurement. Written reports of time and motion economy analysis.

464 Production and Material Control (3) Spring

Prerequisites: Business 306 and 360 or equivalent. Production planning and budgeting; development of the production control system, including product development, materials control, plant and equipment analysis, production standards and methods, personnel and supervision; control of production quantity and quality, measurement of production efficiency.

465 Case Studies in Purchasing (3) Spring

Prerequisite: Business 365. Application of purchasing principles to specific, practical situations. Study and analysis of the experiences of business firms for the purpose of clarifying principles concerning the organization of purchasing departments; relationship with other departments; manufacturing versus buying; negotiation with suppliers; costs quality.

466 **Industrial Accident Control** (3) Fall (Offered 1961-62)
Prerequisites: Business 306 and 362, or equivalent. Theory and practice of the workmen's compensation laws of the State of California Derivation and application of safety orders of the State of California relating to industrial operations. Demonstration, illustration, and use of industrial safety devices, with presentations from the viewpoint of the safety engineer. Audio-visual material on industrial injuries.

467 **Quality Control** (3) Spring
Prerequisites: Business 309 or equivalent. Control of quality of manufactured products by statistical methods. Control charts for variables, fraction defective, defects per unit. Acceptance sampling; single, double, and multiple sampling methods; sampling tables.

468 **Small Business Management** (3) Spring
Prerequisite: Majority of core courses completed or consent of instructor. Application of management principles to small enterprise. Use of case method to study location, records, purchasing, labor relations, organization, control, unit expansion, financial problems and cause of failure, relation to the economy, and taxation. Emphasis on practical aspects of operation by examination of specific cases.

LABOR RELATIONS AND PERSONNEL

471 **Supervision: Principles and Problems** (3) Fall, Spring
Prerequisite: Business 360 or consent of instructor. Supervisory methods and techniques of management; employer-employee relationships. Selection and maintenance of the working force and adjustment of the worker to the job. Problems of upgrading and supervisory training. Supervisory aspects of grievance procedure, conference and committee techniques.

472 **Labor Relations and Collective Bargaining** (3) Spring
Prerequisite: Economics 302. Relations between employers and employees as the latter are represented by organized labor. Collective bargaining as it relates to recognition, wages, hours, working conditions, grievance procedure, seniority, health and safety, etc., and the impact of the law upon these.

473 **Personnel Management** (3) Fall, Spring
Prerequisite: Business 306, or consent of instructor. Principles, methods, and procedures related to effective utilization of human resources in organizations. Historical development and objectives of personnel management, individual differences, labor budgeting, job analysis, recruitment, selection, placement, training, wage, and salary administration, hours of work, and employee health.

74 **Wage and Salary Administration** (3) Spring
Prerequisites: Business 473. Theory and practices of wage and salary dministration: job analysis and preparation of job descriptions, use of ob evaluation scales, establishment of the pay system, performance ppraisal, and additional compensation techniques.

77 **Business Policy** (3) Fall, Spring
Prerequisite: Second semester seniors only. Integration of principles nd policies of business management from the fields of accounting, economics, marketing, finance, statistics, and management in the solution of broad company problems and in the establishment of company polcy. Emphasis on interaction of disciplines in efficient administration of a business.

See also Economics 420, Labor Legislation.

PRINTING MANAGEMENT

79 **Printing Plant Management** (3) Spring (Offered 1960-61)
Prerequisite: Senior standing in the printing management major. Organization and management of all departments in the printing plant, ncluding the application of industrial management factors to the various departments. Inspection trips to study production methods and organization of local printing plants.

LAW AND GOVERNMENT REGULATION

81 **Real Estate Law** (3) Fall, Spring
Prerequisites: Business 338 and three units of business law or consent of instructor. Legal and business aspects of real property ownership and management. Emphasis on California law affecting escrows, contracts, icensing, brokerage, co-ownership, deeds and conveyances, trust deeds and mortgages, acquisition of titles, encumbrances, estates in land, leases and rentals.

480 **Advanced Business Law** (3) Spring
Prerequisite: Business 308 or six units of business law. Nature and sources of business law. Emphasis on financial transactions; negotiable nstruments, security transactions, liens, chattel mortgages, trust receipts, shipping documents, corporate resolutions, business tax law, law of competition, legal collection of claims, insolvency and bankruptcy.

485 **Business and Government** (3) Fall (Offered 1960-61)
Significant points of contact between business and government; the necessity for thoroughly understanding everyday relationships with public authority; analysis of antitrust laws, fair trade laws, and unfair trade practices.

See also Economics 405, Economics of Public Utilities.

GENERAL BUSINESS

398 **Work-Study Assignments and Reports** (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

494 **Electronic Systems and Equipment** (3) Fall, Spring

Prerequisite: Senior or graduate standing or consent of instructor. Recent developments in electronic computers, and the application of these computers for accounting control. Types of computer systems. Administrative problems experienced in the selection and installation of computers. Scientific computation of accounting data. The auditor and electronic data. Case studies.

495 **Electronic Data Processing for Business** (3) Fall, Spring

Prerequisites: Senior or graduate standing, Business 494, or consent of instructor. Problems of programming, scheduling and feedback of accounting data under an integrated electronic system. Programming typical clerical operations. The role of operations research. Case studies.

499 **Independent Study** (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

501 **Administrative Practices and Human Relation** (3) Fall, Spring

Prerequisite: Business 306 or 360. Case studies of human relations problems confronting business administrators. Concepts which can be used to solve the problems confronting the individual in leading people or participating in group actions.

502 **Economic Analysis and Business Operations** (3) Fall, Spring

Prerequisite: Economics 310. Provision for utilizing the tools, concepts, and factual data of the economist in specific problems of business operations. Application of principles, analytical tools, and sources of economic information to practical business situations by means of the case method.

503 **Quantitative Approach to Managerial Decisions** (3) Fall, Spring

Prerequisite: Business 200AB and 309. Business 300 recommended. Use of quantitative information provided from accounting and statistical sources in arriving at solutions to complex business problems. Construction and application of controls over financial, manufacturing, and distributive activities. Quantitative method applied to problems of alternative choices of investment. Emphasis on recognition and definition of problem, where and how to get information, and how to organize, synthesize, and interpret information.

520 Seminar in Accounting Theory and Analysis (3) Fall
Prerequisite: Consent of instructor. Advanced phases of accounting as applied to modern business practice; the background and place of accounting in society and the economy; current developments in accounting theory and techniques.

521 Seminar in Accounting Theory and Analysis (3) Spring
Prerequisite: Consent of instructor. Advanced theoretical concepts mplicit in contemporary accounting practice and current developments n accounting theory and techniques. Specific applications to major aspects of financial statements.

522 Advanced Income Tax Problems and Procedures (3) Fall
Prerequisites: Business 321 and 421. Application of research techniques to actual tax situations pertaining to individuals, partnerships, corporations, estates and trusts. Settlement of tax cases with government auditors. Place of litigation in tax planning. Rationale of income tax law. Case studies.

530 Business Finance Seminar (3) Spring
Prerequisite: Business 434. The business corporation in the American economy. National patterns of sources and distribution of business assets. Effects of public problems on financial decisions of business. Relationship of business decisions and the national economy.

531 Financial Institutions Seminar (3) Fall
Prerequisite: Business 434. The role of financial institutions in the United States. Financial management of savings and loan companies, life insurance companies, commercial banks, and other financial institutions, against a background of national income, national wealth and the flow of funds.

541 Marketing Management Controls (3) Fall
Prerequisite: Consent of instructor. Applications to marketing problems tools provided by such fields as accounting, statistics, applied psychology, finance, and economics. Types of analysis; motivational research, operations research, quantitative market analysis, sales research, and market trends.

542 Seminar in Marketing Problems (3) Spring
Prerequisite: Consent of instructor. Analysis of influences on the consumer, distribution channels, brand and price policies, and other problems faced by executives in their marketing programs. Emphasis on the development of competence in adjusting marketing policies to changes in the general economic climate. Case approach.

560 Contemporary Management Planning (3) Fall

Prerequisites: Business 360 or equivalent. Development of a basi management philosophy with emphasis on business plans and planning business objectives, ethical standards, business policy, responsibility authority and accountability, and organization structure. Case materials searching analysis of company practices.

561 Contemporary Management Control (3) Spring

Prerequisites: Business 560. Continued development of a managemen philosophy; emphasis on the control of activities based upon plans an objectives discussed in 560. Cases and lectures concerned with executiv leadership, morale and communications, control of operation, procedura analysis, automation and operations research.

599 Graduate Project (3)

Directed studies authorized by the graduate adviser in business.

CHEMISTRY

(In the Division of Science and Mathematics)

TAFF: Jaffe (Department Head), Andreoli, Currell, Frisch, Johnston, Keys, Onak.

BACHELOR'S DEGREE CURRICULA

Two programs are offered, one leading to the bachelor of science legree and the other to the bachelor of arts degree. The B.S. program is lesigned to fit the needs of those who plan to (a) do graduate work; nd (b) complete their formal education with the bachelor's degree nd obtain positions in industrial laboratories.

The B.A. program fits the needs of those who (a) want a liberal eduation with a major in chemistry; (b) wish to obtain positions in the ields of chemical literature, technical sales, or chemical patents; (c) re premedical students with a major in chemistry.

For those students who expect to achieve a bachelor's degree in chemstry in the minimum four-year period, the following high school prepration is recommended: algebra (two years), geometry, trigonometry, hemistry, or physics.

Bachelor of Science Major in Chemistry*

ower Division

Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Chemistry 201—Quantitative Analysis I	3 units
Chemistry 202—Quantitative Analysis II	3 units
Physics 201—General Physics I	4 units
Physics 202—General Physics II	4 units
Physics 203—General Physics III	4 units
Geology 101—Physical Geology	4 units
Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units
Mathematics 203—Analytic Geometry and Calculus III	4 units

Jpper Division

Chemistry 401AB—Organic Chemistry	6 units
Chemistry 402AB—Organic Chemistry Laboratory	4 units
Chemistry 411AB—Physical Chemistry	6 units
Chemistry 412AB—Physical Chemistry Laboratory	2 units
Chemistry 410—Advanced Inorganic Chemistry	3 units
Select from the following	9 units

Chemistry 390—Glassblowing (1)
Chemistry 413—Intermediate Physical Chemistry (3)
Chemistry 420—Advanced Organic Chemistry (3)
Chemistry 422—Organic Analysis (3)
Chemistry 424—Polymer Chemistry (3)
Chemistry 426—Organic Syntheses (2)

One year of French, German, or Russian is strongly recommended but not required.

Chemistry 431 and 432—Biochemistry I and II (4-4)
Chemistry 446—Industrial Chemistry (3)
Chemistry 448—Colloid Chemistry (3)
Chemistry 462—Advanced Analytical Chemistry (3)
Chemistry 464—Instrumental Methods of Analysis (3)
Chemistry 499—Independent Study (1-3)
Chemistry 398—Work-Study Assignments and Reports (1-2)

78 uni

A student wishing to concentrate in the fields of biochemistry, organi analytical, physical, or industrial chemistry during his senior year woul be able to do so by choosing the proper courses from the following lis

Biochemistry

Chemistry 431-432—Biochemistry I and II (8)
Chemistry 426—Organic Syntheses (2) *or*
Chemistry 422—Organic Analysis (3)

Organic

Chemistry 422—Organic Analysis (3)
Chemistry 426—Organic Syntheses (2)
Chemistry 420—Advanced Organic Chemistry (3)

Analytical

Chemistry 422—Organic Analysis (3)
Chemistry 462—Advanced Analytical Chemistry (3)
Chemistry 464—Instrumental Methods of Analysis (3)

Physical

Chemistry 413—Intermediate Physical Chemistry (3)
Chemistry 448—Colloid Chemistry (3)
Chemistry 464—Instrumental Methods of Analysis (3)

Industrial

Chemistry 424—Polymer Chemistry (3)
Chemistry 446—Industrial Chemistry (3)
Chemistry 448—Colloid Chemistry (3)

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR CHEMISTRY MAJOR (B.S. Degree)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Unit*
Chem. 101—Gen. Chem.	5	Chem. 102—Gen. Chem. and Qual. Anal.	5
*Math. 100—Basic Math. Anal.	4	Math. 201—Anal. Geom. & Calc. I	4
Geol. 101—Phys. Geol.	4	Physics 201—Gen. Physics I	4
†Engl. 150—Written Expr. *or* Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Phys. Educ. 150	1	Phys. Educ. elective	1

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* It is recommended that students having credit for Math. 100 (on the basis of adequate hig school background and/or examination) start their mathematics sequence with Math. 201 i the fall semester and substitute elective courses in chemistry, physics, or mathematics in thei junior or senior year.

† See "Note" on page 55.

SOPHOMORE YEAR

First Semester	*Units*	*Second Semester*	*Units*
em. 201—Quant. Anal. I	3	Chem. 202—Quant. Anal. II	3
ath. 202—Anal. Geom. and Calc. II	4	Math. 203—Anal. Geom. and Calc. III	4
ysics 202—Gen. Physics II	4	Physics 203—Gen. Physics III	4
ovt. 150—Govt. and Am. Soc.	3	Bio. Sci. 153—Prin. of Bio. or	3
rt 150—Art, Music, Dance or	3	Language elective	4
anguage elective	4		

JUNIOR YEAR

hem. 401A—Org. Chem.	3	Chem. 401B—Org. Chem.	3
hem. 402A—Org. Chem. Lab.	2	Chem. 402B—Org. Chem. Lab.	2
hem. 411A—Physical Chem.	4	Chem. 411B—Physical Chem.	4
il. 150—Phil. Ideas	3	Chem. 410—Adv. Inorg. Chem.	3
ych. 150—Human Behavior	3	Engl. 250—Underst. Lit.	3
&S 350—Personal Health	2	Elective	2

SENIOR YEAR

hemistry electives	6	Chemistry electives	3
ist. 250—U.S. History	3	General Education electives	6
en. Educ. Soc. Sci. elective	3	Electives	3
lectives or	1	Bio. Sci. 153—Prin. of Bio. or	3
rt 150—Art, Music, Dance or	3	Electives	4
lectives	4		

Bachelor of Arts Major in Chemistry *

ower Division

Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Chemistry 201—Quantitative Analysis I	3 units
Chemistry 202—Quantitative Analysis II	3 units
Physics 201-202-203—General Physics I, II, III *or* Physics 101-102—Physics I and II	8-12 units
Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units†
Geology 101—Physical Geology	4 units‡

pper Division

Chemistry 401AB—Organic Chemistry	6 units
Chemistry 402AB—Organic Chemistry Laboratory	4 units
Physical Science electives	15 units
(Physical science electives will be distributed as follows: Chemistry 6-9 units; Conservation 0-3 units; Physics 3-6 units; Geology 0-3 units.)	
	61-69 units

One year of French, German, or Russian is strongly recommended but not required.
Mathematics 202 is recommended but not required.
Premedical students may elect a biology course in lieu of the geology course.

SUGGESTED FOUR YEAR COURSE SEQUENCE FOR CHEMISTRY MAJOR (B.A. Degree)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*U*
Chem. 101—Gen. Chem.	5	Chem. 102—Gen. Chem. and Qual. Anal.	
*Math. 100—Basic Math. Anal.	4	Math. 201—Anal. Geom. & Calc. I	
Geol. 101—Phys. Geol.	4	‡Sp. 150—Oral Expr. *or* Lang. Arts 150B	
Phys. Educ. 150	1	Govt. 150—Govt. & Am. Soc.	
‡Engl. 150—Written Expr. *or* Lang. Arts 150A	3	Phys. Educ. elective	

SOPHOMORE YEAR

Chem. 201—Quant. Anal. I	3	Chem. 202—Quant. Anal. II	
†Physics 201 Gen. Physics I	4	Physics 202—Gen. Physics II	
Bio. Sci. 153—Prin. of Bio.	3	Psych. 150—Human Behavior	
Art 150—Art, Music, Dance	3	Phil. 150—Phil. Ideas	
Elective	3	Elective	

JUNIOR YEAR

Chem. 401A—Org. Chem.	3	Chem. 401B—Org. Chem.	
Chem. 402A—Org. Chem. Lab.	2	Chem. 402B—Org. Chem. Lab.	
Engl. 250—Underst. Lit.	3	Phys. Sci. elective	
Hist. 250—U. S. History	3	Gen. Educ. Soc. Sci. elective	
Phys. Sci. elective	4	H&S 350—Personal Health	

SENIOR YEAR

Phys. Sci. elective	4	Phys. Sci. elective	
Gen. Educ. elective	3	Gen. Educ. elective	
Electives	8	Electives	

COURSES OF INSTRUCTION

100A-B Fundamentals of Chemistry (3-3)

Prerequisites: Physical Science 151 and high school algebra. Design for majors in nursing and home economics. Includes elementary ino ganic, organic, and biological chemistry. Does not apply as subje credit for majors or minors in the Division of Science and Mathematic Lecture two hours; laboratory three hours.

101 General Chemistry (5) Fall

Prerequisite: High school algebra or equivalent. Fundamental la and theories of chemistry. Chemistry of the nonmetallic elements. Le ture three hours; recitation one hour; laboratory three hours.

102 General Chemistry and Qualitative Analysis (5) Spring

Prerequisite: Chemistry 101. Continuation of General Chemistr Qualitative analysis of the metallic elements. Lecture three hours; la oratory six hours.

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* It is recommended that students having credit for Math. 100 (on the basis of adequate hi school background and/or examination) substitute Math. 201 and Math. 202.

† For the student who elects the 12-unit sequence in physics the suggested lower division progra will be as shown for the B.S. degree.

‡ See "Note" on page 55.

1 **Quantitative Analysis I** (3) Fall
Prerequisite: Chemistry 102. Principles and techniques of volumetric
d gravimetric analysis. Lecture one hour; laboratory six hours.

2 **Quantitative Analysis II** (3) Spring
Prerequisite: Chemistry 201. Emphasis on instrumental methods. Lec-
re one hour; laboratory six hours.

0 **Glassblowing** (1)
Elementary techniques in glassblowing. Laboratory three hours. Off-
ed on demand.

8 **Work-Study Assignments and Reports** (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study
ogram. Analysis and reports of the student's performance; regular
oup meetings.

1A-B **Organic Chemistsry** (3-3)
Prerequisite: Chemistry 102. Properties and reactions of the aliphatic
d aromatic carbon compounds. Emphasis on fundamental theories
d reaction mechanisms. Lecture three hours.

2A-B **Organic Chemistry Laboratory** (2-2)
Laboratory exercises to accompany Chemistry 401AB. Must be taken
ncurrently. Preparation and purification of organic compounds. Lab-
atory six hours.

3A-B **Organic Chemistry Laboratory** (1-1)
Laboratory exercises to accompany Chemistry 401AB. Must be taken
ncurrently. Preparation and purification of organic compounds.
esigned for nonchemistry majors who do not have sufficient elective
eway to register for the regular four-unit Chemistry 402AB. Labora-
ry three hours.

0 **Advanced Inorganic Chemistry** (3) Fall
Prerequisite: Chemistry 101, 102. Study of the physical and chemical
operties of the elements from the standpoint of atomic structure and
emical bonding. Emphasis on modern theories of electronic configura-
ons. Lecture three hours.

1A-B **Physical Chemistry** (3-3)
Prerequisites: Chemistry 102, Math. 203, and Physics 203. (Must be
ken concurrently with Chemistry 412AB.) Fundamental physical laws
d theories of chemical structure, thermodynamics and kinetics. Lec-
re three hours.

2A-B **Physical Chemistry Laboratory** (1-1)
Laboratory to accompany Chemistry 411AB. Laboratory three hours.

413 Intermediate Physical Chemistry (3)
Prerequisite: Chemistry 411AB. Selected topics in physical chemistr including radiochemistry, colloid chemistry, photochemistry. Lectu three hours. Offered on demand.

420 Advanced Organic Chemistry (3) Fall
Prerequisite: Chemistry 401AB. Theoretical aspects of organic chem istry; emphasis on reaction mechanisms and stereochemistry. Lectu three hours.

422 Organic Analysis (3) Spring
Prerequisite: Chemistry 401AB. Methods of qualitative and quantit tive analysis of organic compounds. Lecture one hour. Laboratory si hours.

424 Polymer Chemistry (3)
Prerequisite: Chemistry 401AB. Theories of polymer formation. Prep aration and characterization of polymers and relationship of structur to physical properties. Lecture three hours. Offered on demand.

426 Organic Syntheses (2)
Prerequisite: Chemistry 401AB. Advanced laboratory techniques i the preparation of organic compounds. Laboratory six hours.

431-432 Biochemistry I and II (4-4)
Prerequisites: Chemistry 201, 401A-B and 402A-B or 403A-B. Chem istry or carbohydrates, proteins, lipids, vitamins, and hormones. Par ticular reference to the intermediary metabolism of living organisms Lecture three hours; laboratory three hours.

433 Clinical Biochemistry (3) Spring
Prerequisite: Chemistry 431. Study of biochemical methods for th analysis of blood, urine, and other body fluids. Emphasis on standar clinical procedures. Lecture two hours; laboratory three hours.

446 Industrial Chemistry (3)
Prerequisites: Chemistry 101, 102, and 401A. Fundamental chemical and physical principles applied to typical industrial processes. Lecture three hours. Offered on demand.

448 Colloid Chemistry (3)
Prerequisite: Chemistry 101, 102, and 411AB. Electrical and optical properties of colloidal systems, interfacial phenomena, methods of determining the size and shape of colloidal particles. Lecture three hours. Offered on demand.

462 Advanced Analytical Chemistry (3)
Prerequisite: Chemistry 202. Special topics in analytical chemistry including chromatography, mass spectrometry, spectroscopy. Lecture three hours. Offered on demand.

4 **Instrumental Methods of Analysis** (3)
Prerequisite: Chemistry 201. Principles and techniques in the use of truments in chemical analysis. Lecture one hour; laboratory six hours. fered on demand.

9 **Independent Study** (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to ume responsibility for independent work and to prepare written and ıl reports. Project selected in conference with the sponsor before gistration; progress meetings held regularly.

ECONOMICS

(In the Division of Business and Economics)

STAFF: Mathy (Department Head), Bertram, Bright, Fiekowsky, Moore, Norb F. Simpson, W. Simpson, Sorrensen, Tipton, Wu. *Part-time:* Elliott, Ewa Horton, Stine, Stout.

BACHELOR'S DEGREE CURRICULUM

Major in Economics

Prepares students for a B.A. degree in economics to qualify for pos tions in business and government. Specific areas include: finance, tran portation, international trade, banking, agriculture, conservation (resources, communications, and interstate commerce. A major in ec nomics also provides foundations for teaching at the collegiate level an for entrance into a graduate school of business or a law school.

Lower Division

Business 200A—Principles of Accounting	3 uni
Economics 201—Introduction to Economic Analysis	3 uni

(Courses in economic geography, history, government, mathematics, and second semester of accounting are recommended.)

Upper Division

Economics 303—Money, Banking, and the Economy	3 unit
Economics 310—Economics of the Business Firm	3 unit
Economics 411—National Income Analysis	3 unit
Business 309—Applied Business and Economic Statistics I	3 unit
Social Science 450—Scientific Method and Logic	3 unit
Electives in Economics and Business Administration selected in consultation with adviser	12 unit
	33 unit

(The only Business Administration courses acceptable are Business 303; 343; 409; 472; 485.)

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR ECONOMICS MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Unit*
‡Engl. 150—Written Expr. *or* Lang. Arts 150A	3	‡Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. and Am. Soc.	3	Art 150—Art, Music, Dance	3
Phys. Educ. 150	1	Phys. Educ. elective	1
*Econ. 150—Econ. for the Citizen	3	Electives	6
Elective	3		

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* Recommended.

‡ See "Note" on page 55.

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
l. 150—Phil. Ideas	3	Engl. 250—Underst. Lit.	3
. Sci. 154 *or*		Hist. 250—U. S. History	3
hys. Sci. 152	3	Psych. 150—Human Behavior	3
. 200A—Prin. of Acctg.	3	**Bus. 200B—Prin. of Acctg.	3
n. 201—Intro. Econ. Anal.	3	Electives	4
ctive	3		

JUNIOR YEAR

& S 350—Personal Health	2	Econ. 310—Econ. of Bus. Firm	3
th. 353—Gen. Educ. Math.	3	Soc. Sci. 450—Methods and Logic	3
. 309—Applied Bus. Stat. I	3	†Econ. or Business electives	6
n. 303—Mon., Bank., Econ.	3	Elective	3
ctives	5		

SENIOR YEAR

n. Educ. elective	3	†Econ. or Business electives	6
n. 411—Nat. Inc. Anal.	3	Electives	9
ctives	9		

MASTER OF ARTS DEGREE

Prerequisite: An undergraduate major in economics from an accred-
d college or university, or equivalent preparation to provide a foun-
tion for advanced work in economics. Applicants must consult an
viser in economics to determine if any deficiencies exist before enter-
the graduate program.

. Core Requirements	
a. Economics 510—Advanced Economics of an Enterprise System	3 units
b. Economics 520—Contemporary Economic Theory	5 units
c. Economics 599—Graduate Thesis *	3 units
d. Business 409—Applied Business and Economic Statistics II	3 units
. "400" and "500" courses selected with the approval of an adviser. At least 3 units must be at the "500" level	10 units
. Business Administration, Mathematics, or Social Sciences electives (selected with approval of adviser)	6 units
. Comprehensive oral and written examinations in the fields of economics.	
	30 units

COURSES OF INSTRUCTION

All courses below, except Economics 150, 201, and 300 have a prin-
bles of economics course (or Economics 201) as a minimum pre-
quisite.

An oral review of the proposed thesis is to be held before a division committee not later than the 12th week of the first semester in residence. Thesis is to be presented to the chairman of the candidate's committee at least three weeks prior to the end of the semester in which the degree is to be conferred.

See economics major requirements, page 126.

Recommended.

150 Economics for the Citizen (3) (General Education)
Economic organization of free society, consideration of the form a economic function of such socio-economic units as the household, bu ness enterprise, and government. Primary attention to the interdepen ence of these economic units on the level of economic activity and t allocation of resources.

201 Introduction to Economic Analysis (3) Fall, Spring
Basic economic tools, concepts and interrelationships. Emphasis private enterprise system, national income, and the business firm.

300 Economics for Engineers (3) Fall, Spring
Basic economic concepts; relationship of economic problems a engineering problems; role of interest and capital in problems of c minimization; analysis of financial statements; analysis of original a alternative investments; capital depreciation and replacement problen

302 Labor Economics (3) Fall, Spring
Use of labor resources in the economic system; employment, wa rates, development of unions and collective bargaining; labor legislatio

303 Money, Banking, and the Economy (3) Fall, Spring
Nature and flow of money and credit; influence on prices, productio and employment. Commercial and Federal Reserve banking systems a the level of national income.

310 Economics of the Business Firm (3) Fall, Spring
The operation of a price system in a free enterprise economy. Spec emphasis on economic factors governing and influencing manager decisions. (Formerly Economics 410)

390 Current Economic Problems (3) Spring (Offered 1961-62)
Prerequisite: At least one course in economics. Analysis of significa problems of the day such as agricultural price supports, internation dollar shortage, industrial and labor monopoly situation, economic pro lems created by defense program or total war, and events of econom significance which arise during the semester.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-stu program. Analysis and reports of the student's performance; regul group meetings.

405 Economics of Public Utilities (3) Spring
(Offered 1960-61)
Legal and economic basis for governmental regulation of prices a quality of product of privately owned businesses. Emphasis on su industries as electricity, gas, telephone, and urban transportation.

406 Principles of International Economics (3) Fall
Economic bases and mechanisms of international commercial relatio government policies on tariffs, exchange controls, subsidies.

MUSIC—Madrigals (above), and Brass Choir (below)

COLLEGE LIBRARY

11 National Income Analysis (3) Fall

Prerequisite: Economics 303. Analysis and measurement of national ncome and level of employment.

12 Development of Economic Thought (3) Spring
(Offered 1960-61)

Evolution of ideas which man has developed over the years to analyze nd deal with economic problems.

20 Labor Legislation (3) Fall

Prerequisite: Economics 302. Development of common law decisions n the legal status of trade unions and their activities. Consideration of ederal and state laws and their administration in social security, pro-ective labor legislation, and labor relations legislation; emphasis on conomic implications.

30 Federal Reserve Policies and the Money Markets (3) Spring
(Offered 1960-61)

Prerequisite: Economics 303. Advanced study of the money system. mphasis on policies of U. S. Treasury, Federal Reserve banks, and ther factors influencing and determining the flow of funds and money arket conditions.

33 Public Finance (3) Fall

Prerequisite: Economics 303 recommended. Survey of expenditures f governments, methods of securing funds; the impact on economic unctions of society.

35 Economic Fluctuations (3) Fall, Spring

Prerequisite: Economics 303. Analysis of variations in business activ-y; survey of various theories advanced to account for these variations; nalysis of proposals for reducing fluctuations.

Credit may not be secured for both Economics 435 and Business 431.

71 Economic History of the United States (3) Spring

Historical study of American economic development; industrializa-on; national legislation in industry and commerce. (Same as History 76.)

72 Economic History of Europe (3) Fall

Examination of economic development of modern Europe; special tention to industrial revolution. (Same as History 438.)

30 Comparative Economic Systems (3) Fall (Offered 1961-62)

Problems with which all societies must deal in the economic aspects life. Comparative study of different systems which man has proposed which are now in operation to deal with economic problems.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

510 Advanced Economics of an Enterprise System (3) Spring

Prerequisites: Business 502, Economics 310 or consent of instructor Scope and method of economic analysis. Emphasis on the role of the market in resource allocation; the influence of government control and private intervention on economic welfare.

520 Contemporary Economic Theory (5) Spring (Offered 1961-62)

Prerequisite: Economics 411. Intensive examination of the theory of national income; influence of money and government fiscal policy upon economic stability.

599 Graduate Thesis (3)

An independent paper to be developed under the direction of members of the graduate faculty.

EDUCATION

STAFF: Sando (Division Chairman), Adams, Ames, Austin, Bany, Benedetti, Better, Bilovsky, Bishop, Bolling, G. Brown, M. Brown, Butt, Cantrell, Cappa, Caskey, Cheresh, Cowan, Crowe, Dahl, Denny, Eckhardt, Fischer, Forbes, Gellermann, Gilmore, Graham, Hahn, Hall, Hanna, Hanson, Hatcher, Hearnton, Henry, Heywood, Hoover, Horner, Jeffers, Johnson, H. Jones, S. Jones, Kinstler, Kloepper, Klopp, Knapp, Kriegel, Langston, Liddle, Linton, Loder, Lord, Marshal, Matson, Michals, Morman, Mortensen, Neale, J. Nelson, L. Nelson, Nugent, Odom, Ostlie, Ott, Palmer, Peckham, Pitts, Powell, Preston, Prindiville, Robinson, Roth, Samson, Scheffskey, Schubert, Service, Shepherd, Sistrom, Smallenburg, B. Smith, Soeberg, Sparks, Spencer, Sperry, Stafford, Stewart, Stivers, Strobel, Stubbins, Timson, Tonge, Tozier, VanWinkle, Wagstaff, Wandt, Williamson, E. Wilson, Zimnavoda.

ORGANIZATION

The entire college staff shares the responsibility for teacher training. The Division of Education administers the following programs in professional education.

Elementary Education (Department Head, Cappa)
Secondary Education (Department Head, Dahl)
Special Education (Department Head, Lord)
Administration and Supervision (Department Head, Ostlie)
Guidance and Pupil Personnel Services (Department Head, Mortensen)

ADVISEMENT

Personal advisement is available to any student seeking a degree or a credential in teacher education. At his first registration each student should consult an adviser in the field in which he intends to work. He may continue to work with this adviser or seek another as he becomes acquainted with the staff. Full responsibility for meeting all requirements set forth in the catalog will remain with each student.

The Office of Admissions and Records will evaluate previous college work in terms of its relationship to the requirements of Los Angeles State College. All new transfer students will be issued an evaluation, referred to as a "Credit Summary," and a credential evaluation before the beginning of his second semester. Copies are mailed to the student showing those courses that have been accepted on transfer and those courses which are yet to be taken to fulfill the credential and/or degree requirements. Both of these are to be followed without deviation to be assured of meeting graduation requirements. Once issued to the student, the evaluation becomes valid as long as the student pursues the objective specified, and remains in continuous attendance. Any student seeking more than one credential must have an evaluation for each credential.

CREDENTIALS

Los Angeles State College is accredited by the State Board of Education to recommend qualified students for the following credentials:

1. Elementary Education
    - a. General Elementary Credential, see page 136.
    - b. Kindergarten-Primary Credential, see page 137.
2. Secondary Education
    - a. Junior High School Credential, see page 140.
    - b. General Secondary Credential, see page 140.
    - c. Special Secondary Credential, see page 142.
        - Art, see page 73.
        - Business Education, see page 99.
        - Home Economics, see page 226.
        - Industrial Arts, see page 233.
        - Limited Part-time in Industrial Arts, see page 233.
        - Music, see page 265.
        - Nursing Education, see page 283.
        - Physical Education, see page 288.
3. Special Education
    Credential to Teach Exceptional Children with specializations in the followin area:
        - Visually Handicapped, see page 145.
        - Deaf or Hard of Hearing in Special Day Classes, see page 146.
        - Speech Correction and Lip Reading in Remedial Classes, see page 144.
        - Mentally retarded, see page 145.
        - Orthopedically handicapped Including the Cerebral Palsied, see page 145.
4. Administration and Supervision
    - a. Elementary Administration Credential, see page 152.
    - b. Secondary Administration Credential, see page 153.
        - General Supervision Credential, see page 153.
5. General Pupil Personnel Services Credential
    - a. Pupil Counseling, see pages 148-149.
    - b. Welfare and Attendance, see pages 148-149.
    - c. School Psychometry, pages 148-149.
        - School Psychology, see pages 148-149.

Los Angeles State College offers courses which may qualify a graduate to receive the following credentials upon *direct application* t the State Department of Education:

Health and Development Credential–School Nurse, see page 283.
Junior College Credential, see page 142.

ADMISSION TO TEACHER EDUCATION

Admission to Los Angeles State College does not automatically entitl a student to become a candidate for a credential. The standards fo admission to credential candidacy vary depending upon the field whic the candidate wishes to enter. Candidates working for credentials i administration and supervision or in special education should consul the advisers in each case.

A candidate for a regular teaching credential should enroll in Education 300 during his first semester at Los Angeles State College. Th student who successfully completes Education 300 will have met th requirements for admission to the teacher education program. Through this course he will complete the following tests required for admission to teacher education:

1. Writing proficiency test.
2. Speech test.
3. Fundamentals test.
4. Health examination, including chest X-ray.
5. Personality tests.
6. College aptitude test. (This is included with entrance examination. The entrance examination must have been taken within three years of enrollment in Education 300.)

In addition, he must demonstrate evidence of:

1. Scholarship. A grade-point average of 2.25 is expected of elementary credential candidates and of 2.5 for secondary credential candidates. Grades in all education courses must be "C" or better. Students on scholastic probation may not take professional education courses.
2. Academic and Cultural Preparation. A broad, well-planned program of general education with an appropriate major and/or minor(s) is required. Competency is required in all subjects and skills commonly taught in the public school. Elementary credential candidates are urged to include at least 3 units in both art and music in their lower division program. Some skill in playing the piano is recommended for all elementary credential candidates and is required of all kindergarten-primary credential candidates.
3. Personal Fitness. The student must demonstrate personal qualifications in keeping with professional standards. Attention will be directed to general appearance, poise, dress, vitality, temperament, integrity, and general social attitude. Evaluation of personal qualifications may require rating by instructors at Los Angeles State College and possibly an interview by a selected committee.

DIRECTED TEACHING

Admission to teacher education (successful completion of Education 300) does not automatically admit the student to directed teaching.

Directed teaching is one of the most important aspects of the program of teacher education at Los Angeles State College. Admission to this phase of the teacher education program is one of the crucial points in the selection of future teachers. For this reason the Los Angeles State College has developed a careful screening and selection program through which all students who wish to do directed teaching must pass.

A Directed Teaching Committee has the responsibility of passing on all applications for directed teaching. To be assigned to directed teaching the candidate must meet the following requirements:

1. He must be a matriculated student, and possess an authorized permit from the Office of Admissions and Records to register for the semester in which the directed teaching is to be done. If the candidate has not been in continuous attendance at Los Angeles State College since matriculation status was first granted, he must file a "returning student application" with the Office of Admissions and Records within the specified deadline dates. Candidates who have attended as nonmatriculated students must comply with the admissions procedure outlined on page 45 for new students.
2. A satisfactory record on the health examination. Each student must be examined at the college health center.
3. An overall grade-point average of 2.25 for the elementary credential and a 2.5 for the secondary credential and all special education credentials.
4. A grade of "C" or better in all education courses. Any education course with a grade below "C" must be repeated (or an approved substitute course taken). Students on scholastic probation may not take education courses.
5. Completion of Education 300–including satisfactory scores on the fundamentals examination, the writing proficiency test, and the speech test and the Scholastic Aptitude test. Education 300 should be taken the first semester at Los Angeles State College.
6. Completion of a minimum of 12 units of work in Los Angeles State College.
7. Completion of the course prerequisites for Education 440, Education 442, Education 443, or Education 446 as listed in the course descriptions.
8. All secondary directed teaching candidates must be approved by the divisions representing their teaching major and minor.
9. Demonstration of suitable aptitude and fitness for teaching and for adjustment to public school conditions. This factor may be determined by tests, interviews, and other studies evaluated by committee action.
10. Evidence of personality and character traits in keeping with the standards of the profession. Specific attention shall be directed to physical appearance, poise, dress, vitality, social attitude, co-operativeness, temperament, and integrity.

If a student meets all the criteria listed above, he will be approved by the committee.

Ordinarily, all candidates for the kindergarten-primary, general elementary, junior high school, and the special secondary credentials will do their directed teaching in the last semester of their senior year. Ordinarily candidates for the general secondary credential will do their directed teaching in their graduate year. Candidates for the special education credentials will usually do their directed teaching in the graduate year, but outstanding students may be permitted to do directed teaching in the last semester of the senior year. Directed teaching assignments are ade in the elementary and secondary schools of Los Angeles City and os Angeles County. Application for directed teaching must be filed a emester ahead of the actual assignment. Students are responsible for bserving the deadline for filing. Because of the amount of time and ork required of students in directed teaching, they are encouraged to estrict their enrollment to no more than 12 units in the semester in hich they carry 6 or more units of directed teaching. Heavy out-of- chool workloads are strongly discouraged.

Provisional Credential Renewal

Los Angeles State College is prepared to co-operate with students eeking renewal of provisional credentials. A letter of recommendation o the State Department of Education will be written for the student nly if the following conditions have been fulfilled.

1. The applicant must be a regularly admitted student.
2. The applicant must have completed Education 300 successfully.
3. The applicant must have completed the semester unit requirements established by the State Department of Education, at least six units of which must have been completed at Los Angeles State College.

Fulfillment of all requirements set forth by the State Board of Educa- ion for the renewal of provisional credentials are the sole responsibility f the candidate. Students are advised to matriculate immediately upon eceipt of the first provisional credential and seek advisement from the dmissions office and the head of the appropriate department.

Accelerated Program in Teacher Education

A student who has a baccalaureate degree in a field other than ele- entary education may secure an elementary teaching credential with ne additional year of work. A student who has a baccalaureate degree ith an appropriate major and minor may ordinarily secure a secondary eaching credential in a year and a summer session. For additional in- ormation consult the Elementary Education Department or Secondary ducation Department.

ELEMENTARY EDUCATION

Students planning to obtain a general elementary credential and/or a kindergarten-primary credential will ordinarily be granted the bachelor of arts degree with a major in education at the same time they complete the requirements for the credential.

Candidates who have two or more years of successful teaching experience may waive Education 440 and 441 provided they take 11 semester units of elective education courses. Letters verifying successful teaching experience should be signed by a principal, supervisor, or superintendent and forwarded to the Office of Admissions and Records.

A graduate student who has received a bachelor's degree with a major other than elementary education who intends to do directed teaching at Los Angeles State College will be required to complete seven units in the composite minor including at least one course in three of the following four areas: art, music, language arts, and physical education.

The final selection of courses from the composite minor should be made after consultation with the education adviser. By proper planning such a *graduate* student can earn a kindergarten-primary or a general elementary credential in two semesters.

BACHELOR'S DEGREE CURRICULA

General Elementary Credential (Major and Composite Minor)

Lower Division

No professional courses in education taken at a junior college will satisfy credential requirements. It is recommended that lower division work include at least one course in both music and art.

Upper Division

Education 300—Introduction to Credential Programs	N. cr.
Education 312—Principles, Curriculum and Methods in Elementary Education	8 units
Education 413—Psychological and Sociological Foundations of Education	5 units
Education 440—Directed Teaching	8 units
Education 441—The Teacher in the School and Community	3 units

Composite Minor: This program should be selected with the adviser.

1. Art—Select from the following	4 units
Art 300—Art for Elementary School (2) Art 320—Crafts for Elementary School (2) Art 340—Industrial Arts in the Elementary School (2)	
2. Music	4 units
Music 300AB—Music for Children (2-2)	
3. Language Arts—Select from the following	3 units
English 430—Interpreting Children's Literature (3)	

   Speech 460—Speech and Dramatic Activities in Elementary School (3)
   † Speech 461—Speech Problems in the Classroom (3)

4. Social Studies—Select from the following — 3 units
   Geography 150 (301)—Human Geography (3)
   Geography 431—Geography of California (3)
   History 481—The Westward Movement and the West (3)
   History 488—California (3)

5. Physical Education — 3 units
   P.E. 420—Physical Education in Elementary Schools (3)

6. Natural Science—Select from the following — 3 units
   Physical Science 152 (388)—Principles of Physical Science II (3)
   Biological Science 154 (388)—Principles of Biology II (3)
   Nature Study 355 (388)—Natural Science and California Culture (3)
   Nature Study 461—Nature in California (3)

7. Mathematics — 3 units
   Math. 120—College Arithmetic (3)

Kindergarten-Primary Credential (Major and Composite Minor)

Lower Division

No professional courses in education taken at a junior college will satisfy credential requirements. It is recommended that lower division work include at least one course in music and art. Some skill at piano playing will be required.

Upper Division

Education 300—Introduction to Credential Programs	N. Cr.
Education 405—Kindergarten-Primary Education	4 units
Education 312—Principles, Curriculum and Methods in Elementary Education	8 units
Education 413—Psychological and Sociological Foundations of Education	5 units
Education 440—Directed Teaching	8 units
Education 441—The Teacher in the School and Community	3 units

Composite Minor: This program should be selected with the adviser.

1. Art—Select from the following — 4 units
   Art 300—Art for Elementary School (2)
   Art 320—Crafts for Elementary School (2)
   Art 340—Industrial Arts in the Elementary School (2)

2. Music — 4 units
   Music 300AB—Music for Children (2-2)

3. Language Arts—Select from the following — 3 units
   English 430—Interpreting Children's Literature (3)
   Speech 460—Speech and Dramatic Activities in Elementary Schools (3)
   † Speech 461—Speech Problems in the Classroom (3)

4. Social Studies—Select from the following — 3 units
   Geography 150 (301)—Human Geography (3)
   Geography 431—Geography of California (3)
   History 481—The Westward Movement and the West (3)
   History 488—California (3)

5. Physical Education — 3 units
   P.E. 420—Physical Education in Elementary Schools (3)

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† Students who are seeking, or who plan to seek, a special education credential in any area may substitute Speech 434 for Speech 461 in this particular option.

6. Natural Science—Three units selected from .... 3 units
    - Physical Science 152 (388)—Principles of Physical Science II (3)
    - Biological Science 154 (388)—Principles of Biology II (3)
    - Nature Study 355 (388)—Natural Science and California Culture (3)
    - Nature Study 461—Nature in California (3)
7. Mathematics .... 3 units
    - Math. 120—College Arithmetic (3)

SUGGESTED FOUR YEAR PROGRAM FOR ELEMENTARY EDUCATION MAJOR

First semester	Units	Second semester	Units
FRESHMAN YEAR			
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Phys. Educ. 150	1	Math. 120—College Arith.	3
Govt. 150—Govt. and Am. Soc.	3	Phys. Educ. elective	1
Electives	6	Electives	6
SOPHOMORE YEAR			
Art 150—Art, Music, Dance	3	Engl. 250—Underst. Lit.	3
Hist. 250—U. S. History	3	Gen. Educ. Soc. Sci. elective	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Psych. 150—Human Behavior	3
Electives	6	Electives	6
JUNIOR YEAR			
Educ. 300—Intro. Cred. Prog.	N. Cr.	H & S 350—Personal Health	2
Phil. 150—Phil. Ideas	3	Gen. Educ. elective	3
Art 300—Art for the Elem. Sch.	2	Art 320—Crafts for Elem. Sch. *or* Art. 340—Ind. Arts in Elem. Sch.	2
Music 300A—Music for Chil.	2	Music 300B—Music for Chil.	2
Nat. Sci. (Composite minor)	3	Social Studies (composite minor)	3
Educ. 413—Psych and Soc.	5	Phys. Educ. (composite minor)	3
SENIOR YEAR			
Gen. Educ. elective	3	Educ. 440—Directed Teach.	8
Educ. 312—Prin. Curric. Methods in Elem. Sch.	8	Educ. 441—Teacher in Sch. and Community	3
Lang. Arts (composite minor)	3	Electives	5
Elective	2		

MASTER'S DEGREE IN ELEMENTARY TEACHING

The objectives of the Master's degree in elementary teaching are: (1) To improve the candidate's competence in elementary teaching: and (2) to develop the candidate's ability for continued self-directed study in the field of elementary teaching.

1. Prerequisites:
    - a. Graduate standing.
    - b. A general elementary credential or kindergarten-primary credential (any state).
    - c. One year of successful teaching experience prior to beginning course work in this program.

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* See "Note" on page 55.

2. Area of specialization:
   - Select from the following — 3 units
     - Education 507—History and Philosophy of Education (3)
     - Education 525—Educational Sociology (3)
   - Select from the following — 6 units
     - Education 511—Research in Elementary School Mathematics (2)
     - Education 512—Research in Elementary School Social Studies (2)
     - Education 513—Research in Elementary School Reading (2)
     - Education 514—Research in Elementary School Language Arts (2)
     - Education 515—Research in Elementary School Science (2)
   - Education 530—Advanced Study in Child Development — 3 units
   - Education 531—Seminar in Elementary Education — 3 units
   - Education 560—Principles and Practices of Curriculum Development — 3 units
   - Education 599AB *—Graduate Project — 3 units
3. Outside the field of education
   - Select in consultation with adviser — 6 units
4. Electives
   - Select in consultation with adviser — 3 units
5. Comprehensive examination.

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[*] At the discretion of the division chairman a three-unit course may be substituted for Educ. 599AB.

SECONDARY EDUCATION

Before any candidate is assigned to directed teaching in secondary education he must have approval from the division chairman in the teaching major, the division chairman in the teaching minor, and the Department Head in Secondary Education. Each candidate should be certain he has an evaluation outlining all requirements for the credential. Advisement should be secured from both subject field advisers and an education adviser.

Junior High School Credential

By careful planning the candidate may earn the junior high school credential as part of a four-year college program.

The requirements listed below must be met by all students at Los Angeles State College who expect recommendation for the junior high school credential.

1. Completion of a bachelor's degree with a grade point average of at least 2.5.
2. Completion of the United States Constitution requirement either through course or examination.
3. Completion of two teaching minors in subject fields commonly taught in the junior high school. *In each case approval of the teaching minors must be obtained from the chairman of the division concerned.*
4. Completion of the education major listed below:

Education 300—Introduction to Credential Programs	N. Cr.
Education 413—Psychological and Sociological Foundations of Education	5 units
Education 471—Secondary Education: Principles, Curriculum, Evaluation	5 units
Education 480—Fundamentals of Counseling and Guidance	2 units
Education 490—Audio-Visual Instruction	2 units
Education 493—Methods in first teaching field	2 units
Methods in second teaching field	2 units
Education 444YZ—Problems in Secondary Teaching	3 units
Education 443YZ—Directed Teaching	6 units

General Secondary Credential

The general secondary credential is a five-year program requiring at least 30 units beyond the bachelor's degree.

A student working for a general secondary credential should earn a degree with a teaching major and a teaching minor. A student who has a major in the field not commonly taught in high school may use two teaching minors from the approved list. In addition the candidate must meet the professional education requirements outlined below:

1. Completion of a bachelor's degree from an accredited college or university with a grade point average of at least 2.5 including a program of general education as follows:
   a. 40 units of general education [*] with a minimum of 6 semester units in each of the following four areas:
      (1) Science and mathematics;
      (2) The practical arts and the fine arts such as art, music, physical education, and health;
      (3) Social studies;
      (4) The communicative arts such as languages, literature, and speech.

2. Completion of the United States Constitution requirement, either through course or examination.

3. Completion of a minimum of 30 units of upper division and graduate courses after receipt of the bachelor's degree, including at least 6 units in subject fields commonly taught in junior and senior high school.

4. Completion of an approved teaching major and of an approved teaching minor. *Approval of the teaching major and the teaching minor must be obtained in each case from the chairman of the division concerned.* Majors and minors in the teaching fields shall be selected from the subject fields listed below:

   Art, see page 73.
   Business Education, see page 99.
   English, see page 182.
   Foreign Languages, see pages 191 and 345.
   Health Education, see page 215.
   Home Economics, see page 226.
   Industrial Arts, see page 234.
   Language Arts, see page 245.
   Life Science and General Science, see page 83.
   Mathematics, see page 352.
   Music, see page 266.
   Physical Education, see page 290.
   Physical Science and General Science, see page 300.
   Social Studies, see page 331.
   Speech and Drama, see page 352.

5. Completion of the following courses in education: (Not necessary to complete prior to bachelor's degree. See adviser.)

Education 300—Introduction to Credential Programs	N. Cr.
Education 413—Psychological and Sociological Foundations of Education	5 units
Education 471—Secondary Education: Principles, Curriculum, Evaluation	5 units
Education 490—Audio-Visual Instruction	2 units
Education 493—Methods in Major teaching field	2 units
Methods in Minor teaching field	2 units
Education 480—Fundamentals of Counseling and Guidance	2 units
Education 444YZ—Problems in Secondary Teaching	3 units
Education 442YZ—Directed Teaching	6 units

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[*] This 40-unit general requirement is completed when a student meets the graduation requirements outlined on pages 55-58. The candidate for a baccalaureate degree from Los Angeles State College must meet the 45-unit general education requirements as outlined on those pages.

Special Secondary Credential

The special secondary credential in subject fields is ordinarily earned during a four-year program. It requires no work beyond the bachelor's degree. No minor is required. The requirements including approved subject fields for teaching majors are outlined below:

1. Completion of a bachelor's degree from an accredited college or university with a grade point average of at least 2.5 including a program of general education as follows:
   a. Limited industrial arts and nursing education require no general education.
   b. Art, industrial arts, and music require 16 semester hours of general education.
   c. Business education, physical education, and homemaking require 40 semester hours of general education.
2. Completion of the United States Constitution requirement, either through course or examination.
3. Completion of an approved teaching major from one of the following fields:

   Art, see page 73.
   Business Education, see page 99.
   Home Economics, see page 226.
   Industrial Arts, see page 233.
   Limited Part-time Credential in Industrial Arts Education, see page 233.
   Music, see page 265.
   Physical Education, see page 288.

Approval of the teaching major must be obtained from the chairman of the division concerned. No minor is required.

4. Completion of the following courses* in education:

Education 300—Introduction to Credential Programs	N. Cr.
Education 413—Psychological and Sociological Foundations of Education	5 units
Education 471—Secondary Education: Principles, Curriculum, Evaluation	5 units
Education 493—Methods in Major Teaching Field	2 units
Education 490—Audio-Visual Instruction	2 units
Education 444YZ—Problems in Secondary Teaching	3 units
Education 443YZ—Directed Teaching	6 units

Junior College Credential

Persons wishing to teach in the junior colleges of California may do so by completing the special secondary, general secondary, or junior college credential. The junior college credential qualifies one to teach only at the junior college level.

Los Angeles State College offers a program which qualifies and enables students to apply to the California State Department of Education for the junior college credential. State code requirements are as follows:

1. A master's or doctor's degree, preferably in a subject field taught in the junior college.

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* Students studying for a special secondary in Home Economics must take Education 480.

2. A graduate major acceptable to the appropriate academic department at Los Angeles State College. (Not less than 24 semester hours of work, at least 12 of which are upper division or graduate courses.)
3. Preparation in a minor teaching field to be approved by the Co-ordinator, Junior College Education. (At least 12 units, of which 6 must be upper division or graduate level.)
4. Completion of 10 semester units in education including the following courses or equivalents.
   - Education 561—The Junior College .... 3 units
   - Education 548—Directed Teaching in the Junior College .... 4 units
   - To be chosen by advisement with the Co-ordinator, Junior College Education .... 3 units

MASTER'S DEGREE IN SECONDARY TEACHING

The master of arts degree in secondary teaching is designed for the secondary school teacher who wishes to improve his competence as a classroom teacher, extend his knowledge of the subject area which he teaches and achieve a greater understanding of his role as a liaison between school and community and the profession. This program is expected to develop his ability for continued self-directed study in the field of his professional service.

1. Prerequisites:
   a. Graduate standing.
   b. General secondary credential must be completed prior to advancement to candidacy for this degree.
   c. One year of successful teaching experience.
2. Area of specialization:
   a. Foundations area .... 11 units
      Educ. 500—Educ. Investigation & Report (2)
      Educ. 507—History and Philosophy of Education (3)
      Educ. 510—Advanced Educational Psychology (3)
      Educ. 525—Educational Sociology (3)
   b. Curriculum and Methods area select *two* from the following .... 4-5 units
      Educ. 472—Problems of Junior High School (2)
      Educ. 473—Developmental Reading in Sec. School (2)
      Educ. 553—Core Curriculum in Secondary Educ. (2)
      Educ. 554—Problems of High School Students (2)
      Educ. 556—Seminar for Beginning Teachers (2)
      Educ. 560—Principles & Practices of Curric. Develop. (3)
      Educ. 590—Advanced Audio-Visual Methods (2)
   c. Select *one* course from the following .... 2-3 units
      Educ. 532—Seminar in Secondary Education (3)
      Educ. 599B—Graduate Project (2)
3.* Electives to be selected in teaching field or related areas, in consultation with adviser, at least six of these units must be outside of education .... 11-13 units
4. Comprehensive examination required of all candidates.

30 units

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* The following courses required for the General Secondary Teaching Credential are not accepted as part of the M.A. degree program: Educ. 413, 442, 444, 471, 480, 490, 493, or their equivalent.

SPECIAL EDUCATION

Credential to Teach Exceptional Children

Curricula in special education are designed to prepare teachers fo service to California's exceptional children; that is, children who deviat sufficiently from the physically and mentally normal to require specia instruction or special services. Expanding programs in the State requir approximately 800 new teachers each year.

All applicants for credentials to teach exceptional children mus possess a valid regular teaching credential of the kindergarten-primary general elementary, junior high school, or general secondary type *except* that an applicant for a credential to teach, in special day classes exceptional children who are deaf or severely hard of hearing may substitute for the valid regular teaching document an acceptable bachelor' degree and 10 semester hours of acceptable professional work in education required for a regular general teaching credential.

The credential to teach exceptional children authorizes the holder t serve as a teacher of exceptional children in special day classes o remedial classes in elementary and secondary schools in the area or area of specialization named in the credential. Students who do not hold regular credential may complete the requirements for both the regula and special education credential concurrently. To avoid programin problems, students are advised to consult the co-ordinator of specia education early in their program.

The courses as outlined in the following credential programs incorporate units of work relating to guidance and counseling handicappe which are designed to meet the requirement in this area of study.

Speech Correction and Lipreading

This credential is issued to teachers who have completed the requirements for a valid elementary or secondary credential. Students who wis to earn the two credentials concurrently are urged to consult a specia education adviser as early as possible.

* Education 300—Introduction to Credential Programs	N. Cr
Education 488—Psychology and Education of Exceptional Children	3 unit
Speech 434—Introduction to Speech Correction	3 unit
Speech 431—American Phonetics	2 unit
Speech 435Y—Advanced Speech Correction—Psychological	2 unit
Speech 435Z—Advanced Speech Correction—Organic	2 unit
Speech 438Y—Group Techniques in Speech Correction	2 unit
Speech 439Y—Clinical Practice in Speech Correction	2 unit
Education 420—Speech Reading	2 unit
Education 427—Hearing and Its Measurement	3 unit
Education 428—Speech Audiometry and Aural Rehabilitation	3 unit
Audiology 429W—Clinical Practice in Aural Rehabilitation	2 unit
Education 446Y—Directed Teaching in Special Education	4 unit

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* Education 300 is not required of students who have regular valid California public schoo teaching credentials.

Visually Handicapped

This credential is issued to teachers who have completed the require- ents for a valid elementary or secondary credential. Students who ish to earn the two credentials concurrently are urged to consult a ecial education adviser as early as possible.

Education 300—Introduction to Credential Programs	N. Cr.
ducation 488—Psychology and Education of Exceptional Children	3 units
eech 434—Introduction to Speech Correction	3 units
ducation 425—Introduction to Vision	3 units
ducation 424—Braille	3 units
ducation 460—Education of Children with Impaired Vision	3 units
ducation 445Y—Observation in Special Education	1 unit
ducation 446Y—Directed Teaching	4 units

Skill typing by touch system is required.

Electives in special education to complete 24 units.

Orthopedically Handicapped

This credential is issued to teachers who have completed the require- ents for a valid elementary or secondary credential. Students who wish earn the two credentials concurrently are urged to consult a special ducation adviser as early as possible.

Education 300—Introduction to Credential Programs	N. Cr.
ducation 488—Psychology and Education of Exceptional Children	3 units
peech 434—Introduction to Speech Correction	3 units
peech 437—Speech Problems in Cerebral Palsy	3 units
ducation 423—Survey of Physical Defects	3 units
ducation 461—Methods of Teaching Crippled Children	3 units
ducation 445Y—Observation in Special Education	1 unit
rt 410—Art Experiences for Exceptional Children	2 units
ducation 446Y—Directed Teaching	4 units

Electives in special education to complete 24 units.

Mentally Retarded

Education 300—Introduction to Credential Programs	N. Cr.
ducation 488—Psychology and Education of Exceptional Children	3 units
peech 434—Introduction to Speech Correction	3 units
sychology 406—Mental Deficiency	3 units
rt 410—Art Experiences for Exceptional Children	2 units
ducation 467—Methods of Teaching Mentally Retarded	3 units
ducation 445Y—Observation in Special Education	1 unit
ducation 446Y—Directed Teaching	4 units

Electives in special education to complete 24 units.

Applicants preparing to teach severely retarded children should in- lude the following preparation which may be completed as electives r as partial substitution for the above requirements: psychology and ducation of brain-injured children with an overview of clinical types f mental deficiency; music and rhythms for severely mentally retarded; indergarten and primary methods; field work with severely mentally etarded children; and parent counseling.

Education 300 is not required of students who have regular valid California public school teaching credentials.

Deaf and Severely Hard of Hearing

A credential to teach deaf children may be earned in two ways: (1) as a second credential for teachers holding a regular credential, (2) as a part of a baccalaureate program which includes the special education requirements and 10 hours of professional education. The requirements for each of these options are outlined below.

OPTION 1—FOR APPLICANTS WHO POSSESS A REGULAR CREDENTIAL

Education 421AB—Language for the Deaf	3–3 units
Education 422AB—Speech for the Deaf	3–3 units
Education 462—Teaching Elementary School Subjects to Deaf	2 units
Education 427—Hearing and Its Measurement	3 units
Education 428—Speech Audiometry and Aural Rehabilitation	3 units
Education 445Z—Observation in Special Education	2 units
Education 446Z—Directed Teaching	6 units

OPTION 2—A BACCALAUREATE MAJOR IN THE EDUCATION OF THE DEAF INCLUDING CREDENTIAL REQUIREMENTS

An applicant for the credential to teach deaf and severely hard of hearing in special day classes may substitute for the regular general teaching credential an acceptable bachelor's degree and 10 semester hours of acceptable professional work in education required for a regular general teaching credential. These 10 hours should be selected with the consent of your adviser. The following major leads to a bachelor's degree and a credential to teach the deaf.

Lower Division

No professional courses in education taken at a junior college will be accepted.

Upper Division

All courses listed under Option 1
Education 300—Introduction to Credential Programs (N. Cr.)
Selected education courses required for regular teaching credential (10 units)

Other Programs in Special Education

Gifted Children

The State has not outlined special credential requirements for teachers of gifted children. Students who are interested are advised to consult the Head of the Department of Special Education for suggested courses.

Emotionally Disturbed Children

No special credential is required to teach children with behavior disorders. Students interested in this type of work are advised to consult the Head of the Department of Special Education for suggested courses.

MASTER'S DEGREE IN SPECIAL EDUCATION

The master's degree in special education is intended to prepare administrators, teachers, and therapists for work with exceptional children. The candidate for a master's degree may incorporate as part of his program the requirements for a credential in his area of specialization. The program is planned with sufficient flexibility to permit structuring of program in terms of the candidate's particular needs.

Applicants are required to obtain approval of the Department *prior* o admission to the program. Admission steps are as follows: (1) admision to the college as a matriculated student (2) completion of the required graduate qualifying examination (3) completion of Department application including references, etc.

. Prerequisites
  a. Graduate standing.
  b. Oral conference prior to acceptance for candidacy.

. Completion of requirements for California credential in special education in area of candidate's choice.

. Required courses

a. Basic Core	8-11 units
Education 488—Psychology and Education of Exceptional Child (or equivalent) (3)	
Education 534—Seminar in Special Education (3)	
Education 588—Problems and Practices in Special Education (2)	
†Selected graduate course (3)	
b. Select, in consultation with adviser, appropriate offerings from the following	8-13 units
Selected courses in area of specialization; graduate seminar in area of specialization; field work.	
. Outside the field of education	6 units
(Courses must be not only outside the Division of Education but also not required on the credential in the candidate's area of specialization.)	
. Electives to complete 30 hours	0-8 units

. Comprehensive examination.

Qualified students may petition the department head to substitute a graduate project for this requirement.

MASTER'S DEGREE IN SPEECH CORRECTION AND AUDIOLOGY

The Department of Speech and the Department of Special Education have been authorized to offer a Master of Arts degree in Speech Correcion and Audiology. Descriptions, prerequisites, and requirements of the program are available from advisers in Speech Correction and in Audiology.

GUIDANCE AND PUPIL PERSONNEL SERVICES

General Pupil Personnel Services Credential

Los Angeles State College is authorized to recommend candidat to the State Department of Education for the following areas specialization of this credential: Pupil counseling, welfare and atten ance, school psychometry, and school psychology. Previous scho service credentials in this area are no longer issued initially.

Candidates not holding a master's degree are urged to work co currently for a master's degree in guidance, psychology, or sociology

Admission Requirements

Before a student is admitted officially to this program he must be a proved by the General Pupil Personnel Services Credential Committe (He may be admitted simultaneously to the M.A. program in guidance Steps are as follows: (a) obtain preliminary advisement; (b) reque admission to college, including a credit summary; (c) take gradua qualifying examination, (d) complete application forms (an appointme with an interviewing committee will be made after completing a, b, and d); (e) complete interview; (f) receive written notification action of committee (if approved, the candidate will be assigned adviser.)

Pending approval the candidate should register for only 300 or 4 courses. As this program of course work and field experiences is a supe vised internship, it is required that prospective candidates complete a mission requirements at the beginning of training.

Field Work. Before a student may take courses meeting the field wo requirement, he must (a) be an approved candidate, (b) have complete 12 units of work at this college, and (c) be recommended by advis and be reapproved by GPPS Credential Committee.

Applications for field work must be filed in the office of the Depar ment of Guidance and Pupil Personnel Services by December 15 April 15 in the semester preceding the one in which field work will taken.

Credential Requirements

An applicant for this credential shall have completed a specifie experience and training program, including the following requirement

1. A bachelor's degree from an accredited institution.
2. Two years of successful teaching experience, or one year of successful teachi experience and one year of supervised field experience in pupil personnel acti ties with school-age pupils, or two years of supervised field experiences in scho social work, school psychometry, or school psychology of which at least o year shall have been in a public school.
3. Completion of a minimum of 30 semester hours of postgraduate work of upp division or graduate level courses including at least *one* specialized area, and supervised internship. (If the student has completed any of the following cour

requirements in undergraduate status, other courses shall be selected in consultation with his adviser to meet the units required.)

eneral Courses Required

Education 580—Techniques of Counseling *or*	
Psychology 436—Counseling and Interviewing	3 units
Psychology 301—Mental Hygiene *or*	
Education 313—Psychological and Sociological Foundations of Education	2 units
Sociology 474—Methods of Social Work	3 units
Education 488—Psychology and Education of Exceptional Child	3 units
Education 484—School-Family Interpersonal Relations	3 units
Sociology 472—Community Welfare Organization	3 units
Sociology 476—Child Welfare *or*	
Education 485—Laws Relating to Children and Child Welfare	3 units
Education 581—Seminar in Pupil Personnel Services	3 units

Completion of courses in at least *one* of the following specialized areas.

a. Pupil Counseling	
Education 582—Seminar in Guidance	3 units
Education 586AB—Field Work in Pupil Personnel Services	2–2 units
b. Welfare and Attendance	
Education 585—Seminar in School Child Welfare Services	3 units
Education 586AB—Field Work in Pupil Personnel Services *or*	
Sociology 396—Inservice Training	4 units
c. School Psychometry	
Psychology 433—Psychological Testing (applied to mentally and physically atypical) *or*	
Psychology 531—Psychodiagnostic Testing	3 units
Psychology 595—Field Experiences in Psychology	3 units
Education 510—Advanced Educational Psychology	3 units
d. School Psychology (this area requires a minimum of 60 units)	
Psychology 433—Psychological Testing (applied to mentally and physically atypical)	3 units
Psychology 414—Statistical Methods *or*	
Sociology 411—Social Statistics	3 units
Education 510—Advanced Educational Psychology	3 units
Psychology 531—Psychodiagnostic Testing	3 units
Psychology 534A—Methods of Appraising Personality	3 units
Psychology 536—Seminar in Counseling	3 units
Education 435—Diagnosis and Remedial Reading Procedures	3 units
Speech 434—Introduction to Speech Therapy	3 units
Psychology 595—Field Experience in Psychology	3–3 units

Final approval of GPPS Credential Committee.

Health and Development Credential—School Nurse

Students wishing to secure this credential should check with the ead of the Nursing Department for the list of required courses. pon completion of these required courses, the sudent may secure his edential by direct application to the State Department of Education.

MASTER'S DEGREE IN GUIDANCE

The purpose of the master's degree in guidance is to train pupil pernnel workers for the elementary and secondary schools. Graduates of is program are required to demonstrate those personal characteristics, nowledges, and skills needed for counseling with individuals, assisting teachers, contributing toward the general program of the school, and assisting the school in working closely with the community.

1. Prerequisites:
   a. Graduate standing.
   b. Valid regular day teaching credential for public school service.
   c. Education 480.
   d. Approval of the Guidance Committee of the Division of Education. A minimum number of 15 units is required after the student has received approval from the committee. (Admission procedures are the same as for GPPS credential.)
2. Area of specialization:

Education 580—Techniques of Counseling *or* Psychology 436—Counseling and Interviewing	3 units
Psychology 430-431—Psychological Testing	6 units
Education 581—Seminar in Pupil Personnel Services	3 units
Education 586AB—Field Work in Pupil Personnel Services	4 units

3. Outside the field of education
   Select in consultation with adviser .... 6 units
4. Electives selected in consultation with adviser .... 8 units
5. Comprehensive examination.

NOTE: In the selection of additional courses for Items 3 and 4 attention is called to the requirements for the General Pupil Personnel Services credential. It is recommended that all course selections be made only in consultation with an adviser.

MASTER OF SCIENCE PROGRAM IN REHABILITATION COUNSELING

The two year graduate curriculum in rehabilitation counseling is supported, in part, by a grant from the Office of Vocational Rehabilitation, Department of Health, Education and Welfare.

The rehabilitation counselor helps physically or mentally disabled persons to appraise their interests and abilities and understand their needs, so they can develop and carry out plans leading to more satisfactory, independent lives. He typically finds employment in a vocational rehabilitation agency, rehabilitation center, hospital, sheltered workshop and other private agencies. Career opportuities for rehabilitation counselors are expanding rapidly. Increased public awareness of the needs of the disabled, changes in legislation and expanding public programs in vocational rehabilitation have created a high demand for professionally trained persons.

Traineeship grants of $1,800 for first year students and $2,000 for second year students, per academic year, are available to qualified full-time students in the training program.

Undergraduate studies should preferably have been in such social science programs as psychology, sociology, anthropology or education.

Early in the year in which the candidate plans to enter training, he should seek an interview with one of the advisers. For further information regarding the graduate program in rehabilitation counseling, request the Bulletin of Informtion from the Co-ordinator, Rehabilitation Counseling Program. The deadline for filing applications for the fall semester is April 1.

Advancement to Candidacy

Reference is made to the *Graduate Bulletin* which details the requirements for advancement to candidacy.

The program application will detail the planned course work in the ollowing areas:

1. Undergraduate prerequisites	
Psychology 302–Statistical Methods in Psychology (not admissible for graduate credit)	3 units
2. Department of Psychology	
Psychology 418–Psychology of Personality	3 units
Psychology 410–Abnormal Psychology	3 units
Psychology 430–Introduction to Psychology Testing	3 units
Psychology 431–Psychological Testing (Individual)	3 units
3. Department of Sociology	
Sociology 472–Community Welfare Organizations	3 units
Sociology 474–Methods of Social Work	3 units
4. Department of Guidance	
Education 589A –Principles of Rehabilitation	3 units
Education 589B –Rehabilitation Counseling	3 units
Education 592 –Seminar in Rehabilitation Counseling	3 units
Education 538 –Diagnosis in Vocational Counseling	3 units
Education 593 –Transitional Work Programs in Rehabilitation	3 units
Education 487AB–Medical Aspects of Disability	4 units
Education 594 –Seminar in Psychological Aspects of Disability	3 units
Education 482A –Factors in Vocational Adjustment	3 units
Education 482B –Occupational Analysis and Information	3 units
A course in developmental psychology approved by the student's adviser	2 units
5. Option	
One course from a list of approved options in support of student's professional objective	3 units

6. Field Work

The Los Angeles metropolitan area provides unusual facilities for field work experiences. The number and variety of rehabilitation agencies in the area are unparalleled on the West Coast. The major rehabilitation agencies have agreed to co-operate with the Los Angeles State College program. A student wishing to take Types B and C field work must indicate his intention on a form provided by the Supervisor of Field Relations, no later than August 1 for the fall semester and no later than December 1 for the spring semester.

The field work experiences may be grouped about three phases:

A. *Directed Observation.* The student will visit a variety of rehabilitation agencies to give him a broad view of the varied agency settings, types of clients, and methods of rehabilitation encountered.

B. *Practice in Specific Diagnostic and Counseling Functions.* The student will be given practice under agency supervision in carrying out such specific tasks as intake interview, determining eligibility for service, taking a case history, administering objective tests, etc.

C. *Practice in Rehabilitation Counseling.* During this phase, the student will assume the level of responsibility normally given the counselor in the particular agency. He will be responsible for integrating medical, psycho-social, and vocational data about the client, using such data appropriately in the counseling process; conferring with other professionals and agencies; and taking necessary steps to facilitate his client's vocational adjustment.

ADMINISTRATION AND SUPERVISION

Students enrolling in courses in administration and supervision shou
indicate as early as possible the credentials for which they are workin
No person will be considered a candidate for a credential until an evalu
ation has been requested by the student and has been processed by th
college. Prospective credential candidates must have an adviser in th
Department of Educational Administration and Supervision.

Field Work

Courses in field work, Education 565AB and Education 566AB, ar
full-year courses carrying two units of credit each semester. Field wor
students register in the fall semester for the A section and must reregist
in the spring semester for the B section.

Prerequisites. Education 565AB and Education 566AB may be taken only after th
student has met the following criteria:

1. At least three years of successful teaching experience must be verified by lett
from the principal, supervisor, or superintendent.
2. Personal qualifications indicating probability of successful administrative
supervisory work must be verified by a principal, supervisor, or superintenden
The recommendation from a practicing administrator or supervisor will be r
quired of all candidates prior to assignment to field work.
3. The student, to be approved for field work, must have been regularly admitt
to the college as a graduate student (fully matriculated).
4. Twelve units of work in education, not including prerequisites, but includin
Education 560, 563, 570 or Education 576, must be completed before field wo
can be undertaken. At least six of these units must be in residence at Los A
geles State College.
5. The applicant should have at least one year's teaching experience in the scho
in which he is to do field work.

(Students seeking enrollment in field work (Education 565AB and Educatio
566AB) must make application through the Department of Educational A
ministration and Supervision prior to July 1. If approved, the student's nan
is placed on an eligibility list permitting initial registration for the fall term

The Department of Educational Administration and Supervision r
serves the privilege of making exceptions to the above policies and pr
cedures, but will do so only for exigent reasons.

Elementary Administration Credential

The requirements listed below must be met by all students who expe
recommendation for the elementary school administration credentia

1. Possession of a valid general elementary school credential.
2. Three years of successful teaching experience in elementary schools.
3. Thirty semester hours of upper division or graduate work in addition to th
holding of the general elementary credential.
4. Education 409 and Education 480 or their equivalent.

5. Completion of the following courses:

Education 560—Principles and Practices of Curriculum Development	3 units
Education 563—Supervision of Instruction and Curriculum	3 units
Education 565AB—Field work in Elementary School Administration and Supervision	4 units
Education 570—Organization and Administration of the Elementary School	3 units
Education 572—Law and Public School Organization	3 units
Education 573—School Finance and Business Management	3 units
Electives selected with the adviser	11 units

(Students studying for an administration or supervision credential should consult requirements for the master of arts degree in these areas. Both programs can be carried on at the same time. See page 138.

Secondary Administration Credential

The requirements listed below must be met by all students in Los ngeles State College who expect recommendation for the secondary hool administration credential.

1. Possession of a valid general secondary credential.
2. Three years of successful teaching experience.
3. Nineteen semester hours of graduate work in addition to fulfilling requirements for the general secondary credential and prerequisites.
4. Education 409 and Education 480 or their equivalent.
5. Completion of the following courses:

Education 560—Principles and Practices of Curriculum Development	3 units
Education 563—Supervision of Instruction and Curriculum	3 units
Education 566AB—Field Work in Secondary School Administration and Supervision	4 units
Education 572—Law of Public School Organization	3 units
Education 573—School Finance and Business Management	3 units
Education 576—Organization and Administration of the Secondary School	3 units

The Supervision Credential

The requirements listed below must be met by all students requestg recommendation for the school supervision credential.

1. Possession of an acceptable bachelor's degree and a valid regular California credential.
2. Verification of desirable personal characteristics of supervision by two of the student's administrators or supervisors of the last five years.
3. Verification of five years successful public school service.
4. Education 409 and Education 480, or their equivalents.
5. Completion of 24 semester units or more in course work appropriate to the field. Consult the department office for particulars.

MASTER'S DEGREE IN ELEMENTARY SCHOOL ADMINISTRATION

The primary objectives of the master's degree in elementary school dministration are to provide students who have the potential for ecoming successful administrators or supervisors the opportunity (1) o study and experience the basic problems faced by administrators and supervisors at the local *school* level so as to insure initial competence in administering or supervising such schools; (2) to obtain an understanding and appreciation of educational problems at the school district, county, state, and national levels, as these problems relate to the successful operation of a local school; (3) to increase the quality of perception in working with pupils, fellow educators, and community members.

1. Prerequisites:
   a. Graduate standing.
   b. General elementary teaching credential.
   c. Three years of successful teaching experience.
   d. Education 409, Education 480.
2. Area of specialization:

Education 507—History and Philosophy of Education *or* Education 525—Educational Sociology	3 units
Education 560—Principles and Practices of Curriculum Development	3 units
Education 563—Supervision of Instruction and Curriculum	3 units
Education 565AB—Field Work in Elementary School Administration and Supervision	4 units
Education 570—Organization and Administration of the Elementary School	3 units
Education 572—Law and Public School Organization	3 units
Education 573—School Finance and Business Management	3 units
Education 598—Seminar in Educational Administration *or* Education 599AB—Graduate Project	3 units

3. Outside the field of education

Select in consultation with adviser	6 units

4. Comprehensive examination

MASTER'S DEGREE IN SECONDARY SCHOOL ADMINISTRATION

The primary objectives of the master's degree in secondary school administration are to provide students who have the potential for becoming successful administrators or supervisors the opportunity (1) to study and experience the basic problems faced by administrators and supervisors at the local school level so as to insure initial competence in administering or supervising such schools; (2) to obtain an understanding and appreciation of educational problems at the school district, county, state, and national levels, as these problems relate to the successful operation of a local school; (3) to increase the quality of his perception in working with pupils, fellow educators, and community members.

1. Prerequisites:
   a. Graduate standing.
   b. General secondary teaching credential.
   c. Three years of successful teaching experience.
   d. Education 409, Education 480.
2. Area of specialization:

Education 507—History and Philosophy of Education *or* Education 525—Educational Sociology	3 units
Education 560—Principles and Practices of Curriculum Development	3 units
Education 563—Supervision of Instruction and Curriculum	3 units

Education 566AB—Field Work in Secondary School Administration and Supervision	4 units
Education 572—Law and Public School Organization	3 units
Education 573—School Finance and Business Management	3 units
Education 576—Organization and Administration of the Secondary School	3 units
Education 598—Seminar in School Administration and Supervision *or* Education 599AB—Graduate Project	3 units

3. Outside the field of education
   Select in consultation with adviser .... 6 units
4. Comprehensive examination

MASTER'S DEGREE IN SUPERVISION

Students who desire a graduate degree in supervision are advised to onsult with the department office.

COURSES OF INSTRUCTION

Prerequisite: Upper division standing for all education courses.

00 Introduction to Credential Programs (N. Cr.) Fall, Spring
Required of all students qualifying for a teaching credential. Fulfills tate requirements for selection of students entering teacher credential urricula.

12 Principles, Curriculum, and Methods in Elementary School (8) Fall, Spring
Prerequisite: Education 313. Laboratory course covering principles, urriculum, methods, and materials of elementary school instruction, vith major emphasis on reading, language arts, arithmetic, social studies, nd science. Attention given to modern methods of teaching elemen- ary school subjects required by the laws of California; includes audio- isual methods. Students observe and participate in selected elementary chool classrooms one-half day per week. Required of all candidates or general elementary credential. (Includes material covered in Edu- ation 490.)

02 Growth and Development (2) Fall, Spring
Prerequisite: Psychology 101 or 150, or consent of instructor. Study f the child from 6 to 18 with emphasis on physical, motor, social, ntellectual, and emotional growth and development. Observation of hildren. Credit may not be secured for both Education 402 and Psy- hology 412.

05 Kindergarten-primary Education (4) Fall, Spring
Prerequisite: Education 300. Principles, curriculum, materials, and nethods of the kindergarten and first three grades. Guidance procedures nd techniques of parent education.

406 Principles of Education (2) Fall, Spring

The modern public school; its history and development; its objectiv and operations; its functions as a social agency. Credit may not secured for both Education 406 and 471 or 312.

409 Tests, Maesurements and Evaluation (2) Fall, Spring

Construction and use of teacher-made objective examinations; sele-tion and interpretation of standardized tests; elementary statistic techniques; practical approaches to evaluation of instruction.

410 Educational Psychology (3) Fall, Spring

Application of psychological research and theory; major attenti devoted to problems of learning, individual differences, child capaciti and behavior as revealed in school environment.

413 (313) Psychological and Sociological Foundations of Education (5) Fall, Spring

Child and adolescent growth and development, educational psych-ogy, mental hygiene, and educational sociology, as these are foundatio to the development of effective elementary and secondary school teac-ers. This course is equivalent to Education 402 and 410, and Psycholo 301.

414 Methods of Teaching Spanish in the Elementary School (2)

Teaching methods, instructional materials, and evaluate techniqu for a modern program of teaching the Spanish language to childr in elementary school.

415-419 Teaching in the Elementary School

415 Teaching Arithmetic in the Elementary School (2) Fall, Sprin
416 Teaching Social Studies in the Elementary School (2), Fall, Spring
417 Teaching Language Arts in the Elementary School (2) Fall, Spring
418 Teaching Science in the Elementary School (2) Fall, Spring
419 Teaching Reading in the Elementary School (2) Fall, Spring

Prerequisites: Education 312 and Education 413, or equivalent. T above courses are designed for teachers with experience who poss their B.A. degree and a credential. These courses do not meet t requirements for elementary education major or the M.A. degree elementary teaching. Each course provides for intensive study of t particular subject area, gives an opportunity for exploration, analys and interpretation of modern teaching trends and issues; permits co-centrated study of specific problems and methods as encountered experienced teachers. Not more than a total of four units in the abo series will be accepted for degree credit after completion of Educ-tion 312.

20 **Speech Reading** (2) Fall, Spring
Principles and methods of teaching speech reading or lipreading. Dis-
ussion of vocabulary development material and preparation of source
ollections for various groups.

21A-B **Language for the Deaf** (3-3) Fall, Spring
Prerequisites: "A"–consent of instructor; "B"–Educ. 421A. Brief
istory of education of the deaf; natural acquisition of language in
hildren who have normal hearing; fundamentals and techniques for
eveloping and building language with children who are deaf from
reschool throughout school age levels. Lipreading for deaf children
; necessary to receptive language development in oral education.

22A-B **Speech for the Deaf** (3-3) Fall, Spring
Prerequisites: "A"–consent of instructor; "B"–Educ. 422A. Brief
ırvey of methodology of education of the deaf; development of oral
ommunication for the child who is deaf. Detailed study of the essen-
als of good speech and of methods of building or correcting the
›eech of the deaf. Procedures for developing use of residual hearing.

23 **Survey of Physical Defects** (3) Fall
Physical defects commonly found among orthopedically handicapped
ıildren; implications for education and treatment.

24 **Braille** (3) Fall
Practice in reading and writing Braille; methods and techniques for
:aching Braille.

25 **Introduction to Vision** (3) Fall
Anatomy, physiology and hygiene of eye; common visual defects
›und among children; principles of vision screening and problems of
ljustment to visual handicaps.

27 **Hearing and Its Measurement** (3) Fall, Spring
Theory and technique of pure-tone threshold and screening audiom-
ry; physics of sound as related to hearing measurements; anatomy,
ıysiology, and pathology of the ear. Designed to provide basic knowl-
lge of the auditory problems of the hearing handicapped and to meet
ıe requirements for the public school audiometrist certificate.

28 (196B) **Speech Audiometry and Aural Rehabilitation**
(3) Fall, Spring
Prerequisite: Education 427. Interpretation and use of the audiogram
ıd speech audiometry scores as guides to educational procedures and
anagement; instruction in making full use of residual hearing in
medial programs including knowledge of amplification equipment.

5 **Diagnosis and Remedial Reading Procedures** (3) Fall, Spring
Causes and nature of reading difficulties and procedures for diagnosis
ıd remedial treatment.

440 (150A-B) Directed Teaching in the Elementary Schools (4-8) Fall, Spring

Prerequisites for elementary or kindergarten-primary majors: Education 312 and 413. The composite minor must also be near completion before directed teaching is attempted.

See detailed section on directed teaching for further prerequisites. Directed teaching for kindergarten-primary and elementary creden tials.

441 The Teacher in the School and Community (3) Fall, Spring

To be taken concurrently with Education 440. Provides experience in home-school-community relationships; the school community an its resources; parent-teacher meetings and conferences; effective practices in human relations; legal, ethical, and professional responsibilitie of the teacher; the school curriculum in action. Taught by the schoo principal and the college supervisor. Required for elementary and kindergarten-primary credentials.

442Y-Z Directed Teaching for General Secondary (3-3) Fall, Spring

Prerequisites: Education 300, 413, 471. The following courses mus be taken prior to, or concurrently with, directed teaching: Educatio 480, 490, 493, and 444YZ.

See the detailed section on directed teaching for other prerequisites. Directed teaching is the culminating experience in the prospectiv teacher's professional training. Directed teaching is done under the dail supervision and guidance of a qualified training teacher regularly employed in secondary teaching. A designated member of the college staf also assists in general supervision and counseling. Both city and count schools co-operate in the directed teaching program.

443Y-Z Directed Teaching for Junior High School and Special Secondary (3-3) Fall, Spring

Prerequisites: Education 300, 413, 471. The following courses mus be taken prior to, or concurrently with, directed teaching: Educatio 490, 493, 444YZ, and 480 for junior high school credential.

Directed teaching for the junior high school credential and the special secondary in subject fields. Ordinarily taken in the last semester o the senior year.

444Y-Z Problems in Secondary Teaching (1-2) Fall, Spring

Must be taken concurrently with directed teaching. Classroom problems arising in connection with student teaching, and problems whic arise as part of a teacher's total school responsibility. (Music majors onl in 444Z will focus on observation in elementary school.)

445Y-Z Observation in Special Education (1-2) Fall, Spring

Prerequisite: Consent of instructor. Provides an opportunity for first hand experience with educational programs in special education. Observation should precede or be taken concurrently with Education 446.

46Y-Z Directed Teaching in Special Education (4-6) Fall, Spring
See detailed section on directed teaching for description of criteria or admission to directed teaching (pages 133 to 134). Directed teaching the culminating experience in the professional training sequence. The xperience is under the daily supervision and guidance of a qualified eacher working in special education. A member of the college staff ssists in supervision and counseling. Both city and county schools co-perate in the special education program.

60 Education of Children With Visual Handicaps (3) Spring
Problems of instruction of visually handicapped children: special iethods in Braille and sight conservation, curriculum adjustments, class-oom problems including social adjustment and recreation.

61 Methods of Teaching Crippled Children (3)
Prerequisites: Education 423 and 488. Problems in adaptation of iethods to meet the needs of the child with limitations resulting from rippling conditions.

62 Teaching Elementary School Subjects to the Deaf (2) Fall
Prerequisites: One course in language for the deaf and Education 312 r equivalent. Problems and techniques of adjusting elementary school urriculum to the needs of deaf children.

63 Teaching Reading to the Deaf (2) Spring
Prerequisite: One course in language for the deaf. Techniques of aching reading to deaf children.

64 Teaching Secondary Subjects to Deaf (2) Spring
Prerequisite: Educ. 471 or equivalent. Special problems of adjust-ig the secondary school curriculum to the needs of deaf children.

57 Methods of Teaching Mentally Retarded (3) Fall, Spring
Prerequisites: Educ. 312 or 471; recommended prerequisite: Psychol-gy 406. General characteristics of the mentally retarded and their nplications for learning and teaching. Methods and teaching techniques. evelopment of curriculum materials and teaching devices.

70 Curriculum in Secondary Education (2) Spring
Prerequisites: Education 406, 413, or consent of instructor. Curricu-m in secondary education in the United States. Aims and scope of odern secondary school practices and current issues in curriculum evelopment. Credit may not be secured for both Educ. 470 and 471.

71 (371) Secondary Education: Principle, Curriculum, Evaluation (5) Fall, Spring
Prerequisite: Junior standing and Education 413 concurrently or be-re. Principles and philosophy of secondary education in the United ates; organization, curriculum, evaluation, and teaching practices for condary schools. Observation-participation in junior and senior high hools. (Equivalent to Educ. 406, 409, 470.)

472 Problems in the Junior High School (2) Fall, Spring

Prerequisite: Possession of a junior high school credential, or conse of the instructor. The unique problems of the American junior hig school. Designed for experienced junior high school teachers and admi istrators.

473 Developmental Reading in the Secondary School (2) Fall, Spring

Prerequisite: Possession of a general secondary or junior high scho credential, or consent of instructor. Techniques and procedures f improving and extending the reading habits, skills, and interests of se ondary students.

475 Curriculum Construction for Adult Classes (2) Fall

Selection and organization of subject matters for mature student organization of concise teaching units; definition of educational goal selection of supplementary and reference material.

476 Methods and Procedures in Teaching Adults (2) Fall, Spring

Effective methods of teaching adults, basic methods of adult educ tion, relationship of subject matter and teaching methods. Lecture demonstrations, and discussions. Required for renewal of special adu education credential.

478 Organization, Administration and Supervision of Adult Education (2) Spring

Procedures for administration and supervision of classes and schoo for adults.

479 History and Philosophy of Adult Education (2) Spring

Basic principles of adult education; social and philosophical signif cance of adult education; history and description of past and prese movements in adult education.

480 Fundamentals of Counseling and Guidance (2) Fall, Spring

Prerequisite: Education 413 or equivalent. General orientation t those factors involved in better understanding of individual student basic principles and practices of the pupil personnel program.

481 Counseling and Guidance Procedures in Adult Schools (2) Spring

The nature of the problems of adult students; the counselor's role i adult education; practicum in counseling methods and techniques.

482A Factors in Vocational Adjustment (3) Fall

Covers the knowledges useful to the understanding of vocation choice and the vocational life process.

82B Occupational Analysis and Information (3) Spring

Classification of occupations according to various criteria; commun- ty and national occupational surveys; job analysis. Classifying occupa- ional information for counseling purposes; its use in the counseling rocess.

84 School-Family Interpersonal Relations (3) Fall, Spring

Prerequisites: Substantial background in educational psychology, sychology, or sociology. Dynamics of family, pupil-teacher, teacher- arent, and pupil-pupil relationships, including methods and materials f family counseling, group work, home visits, parent conferences, and roblems of home and school.

85 Laws Relating to Children and Child Welfare (3) Fall, Spring

Problems of child welfare and attendance; application of federal, ate, and local laws relating to education, employment, health and wel- re of school-age children.

87A-B Medical Aspects of Disability (2-2) Fall, Spring

Prerequisite: Consent of instructor. Etiology, therapy, and prognosis f the major physical and psychiatric disabilities. Assessment of physical apacities and limitations. Typical restorative techniques.

88 Psychology and Education of the Exceptional Child (3) Fall, Spring

Nature, degree, and incidence of conditions which differentiate a hild from the normal pattern sensorially, neurologically, physically, entally, or psychologically. California state laws in relation to the lentification and education of the deviate. Special problems of counsel- g the handicapped. Field trips.

9 Teacher Guidance for Exceptional Children (2)

Prerequisites: Education 488 and the foundation course in the stu- ent's area of specialization. Problems of personal adjustment and ocational guidance affecting the physically, mentally, and socially andicapped and their families.

0 Audiovisual Instruction—Methods and Techniques (2) Fall, Spring

Prerequisites: For credential candidates: Education 413 and either ducation 312 or Education 471, or previous teaching experience. ethods and techniques of using audiovisual materials and equipment; riety, scope, sources, selection, teaching techniques, and evaluation materials. Training in operation of equipment. One hour laboratory er week required.

1 Principles of Business Education (3) Fall, Spring

Aims, scope, organization, administration, and teaching of business lucation in secondary schools; student-teacher relationships; business- lucation curriculum; modern trends in business education.

492 Education of Children With Special Abilities (3)

Research findings on the nature of differential aptitudes and persor ality characteristics of gifted children; methods of identification, ac celeration, grouping, and enrichment. Special attention to evaluation c programs, problems of underachievement, counseling, scholarships, an conservation of talent.

493 Methods and Materials in Secondary School Subjects (2)
Fall, Spring

Prerequisite: Education 413 and 471, concurrently or before. A serie of professional courses intended for prospective secondary schoo teachers in indicated subject fields. Each course will include considera tion of objectives, methods, materials, and problems involved in teachin in the particular field; observation in junior and senior high schoo Each candidate for a secondary credential must complete appropriat methods course in his major and minor. The methods course should b taken prior to Education 442.

493A	Methods of Teaching Art.
493Bb	Methods of Teaching Bookkeeping and Related Subjects.
493Bt	Methods of Teaching Typewriting.
493FL	Methods of Teaching Foreign Language. (Fall only.)
493HE	Methods of Teaching Home Economics.
493H&S	Methods of Teaching Health and Safety Education.
493IA	Methods of Teaching Industrial Arts.
493LA	Methods of Teaching Language Arts.
493Ma	Methods of Teaching Mathematics.
493MuA	Methods of Teaching Instrumental Music. Prerequisite Music 210, 211, 212, and 213. (May be taken concur rently.)
493MuB	Methods of Teaching Choral Music. Prerequisites: Musi 381 and 340.
493MuC	Methods of Teaching Elementary Music. Prerequisite: Mu sic 340 or consent of instructor.
493N	Methods of Teaching in Nursing.
493PE	Methods of Teaching Physical Education.
493Sc	Methods of Teaching Science.
493SS	Methods of Teaching Social Studies.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability t assume responsibility for independent work and to prepare written an oral reports. Project selected in conference with the sponsor befor registration; progress meetings held regularly.

GRADUATE COURSES

500 Educational Investigation and Report (2) Fall, Spring

Methods employed in educational research. Critical analysis of edu cational literature on the problems encountered by teachers, admir rators and other school personnel. Planning of investigations in oblem areas of interest to students. Credit cannot be given for both lucation 500 and Education 599A.

7 **History and Philosophy of Education** (3) Fall, Spring
Prerequisite: Graduate standing or consent of instructor. Historical velopment of education. Special attention to philosophies of educan at each of its various levels.

0 **Advanced Eduactional Psychology** (3) Fall, Spring
Prerequisite: Education 410 or 413 and graduate standing. Recent and tstanding contributions in research, practical experimentation, and eory which apply to the field of educational psychology.

1 **Research in Elementary School Mathematics** (2) Fall
Prerequisite: Experience as an elementary school teacher. Analysis of blished research on teaching and learning of mathematics in the mentary school.

2 **Research in Elementary School Social Studies** (2) Fall, Spring
Prerequisite: Experience as an elementary school teacher. Analysis of blished research on the teaching and learning of social studies in the mentary school.

3 **Research in Elementary School Reading** (2) Fall, Spring
Prerequisite: Experience as an elementary school teacher. Analysis of blished research on the teaching and learning of the reading process.

4 **Research in Elementary School Language Arts** (2) Spring
Prerequisite: Experience as an elementary school teacher. Analysis of blished research on the teaching of the language arts (except reading) the elementary school.

5 **Research in Elementary School Science** (2) Fall, Spring
rerequisite: Experience as an elementary school teacher. Analysis of blished research in science teaching at the elementary school level.

Educational Sociology (3) Fall, Spring
Application of insights of social sciences, especially sociology, to blems of today's culture-centered school. Areas include: the indiual in the group, social classes, the family, the community, politics, ool economics, social psychology, and social philosophies.

Advanced Study in Child Development (3) Fall, Spring
rerequisites: Education 413, Education 402, or equivalent, and at t one year's teaching experience. Recent and outstanding contribus in research, practical experimentation, or theory which have imtant bearing upon the problems of human development; the significe of the developmental approach to the education of children.

531 **Seminar in Elementary Education** * (3) Spring

Prerequisites: Education 312, Education 413. Identification and ana ysis of persistent problems in elementary education.

532 **Seminar in Secondary Education** * (3) Fall, Spring

Prerequisites: Secondary teaching credential and consent of instructc Identification and analysis of persistent problems in secondary educ tion.

534 **Seminar in Special Education** (3) Fall, Spring

Prerequisite: Education 488. Review of studies and investigations rela ing to the problems of adjustment to physical handicaps.

535 **Seminar in Mental Retardation** (3) Spring

Prerequisite: Psychology 406. Review of studies and investigations the learning and adjustment problems of retarded children.

536 **Seminar in Hearing** (3)

Prerequisites: Education 427, 428, and 420, or consent of instruct Review of scientific studies and investigations; technical problems providing effective rehabilitation of the hard of hearing and deaf.

538 **Diagnosis in Vocational Counseling** (3) Fall

Prerequisites: Psychology 430 and Education 482A. Clinical metho of individual appraisal are reviewed and their usefulness in vocatio diagnosis evaluated. Individual dynamics through case studies.

548 **Directed Teaching in the Junior College** (4) Spring, Fall

Prerequisites: Education 561, or its equivalent, and approval of t Co-ordinator, Junior College Education. Directed teaching is the c minating experience in the professional training program for the juni college credential.

553 **The Core Curriculum in Junior and Senior High Schools** (2) Fall, Spring

Prerequisite: Possession of a secondary credential or the consent instructor. Analysis of problems and programs involving integrat social studies, language arts, and other secondary curriculum. Trends the core program.

554 **Problems of High School Students** (2) Fall, Spring

Prerequisite: Possession of a secondary credential and seconda teaching experience. Designed for practicing junior and senior hi school teachers. The typical problem of dating, family relationships, nancial planning, military service; special adolescent problems wit classrooms as presented by individual teachers.

556 **Seminar for Beginning Teachers** (2) Fall

Restricted to teachers with less than four years experience. Proble that are met and reported by beginning teachers. Designed to help inning teachers make a satisfactory start in the schools in which they egin their teaching.

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* Ordinarily taken by candidates for the master of arts degree during the semester in which degree requirements are completed.

60 Principles and Practices of Curriculum Development (3) Fall, Spring

Prerequisites: Basic methods courses in elementary and secondary edu- ation. Critical examination of curricular trends in light of historical erspective, sociological change, research in child growth and basic hilosophies; consideration of objectives, practices, materials, and evalua- on inherent in the curriculum development process.

61 The Junior College (3)

Prerequisite: Consent of instructor. History, aims and functions, or- nization, and curriculum of the junior college. Required of students eking the junior college teaching credential.

63 Supervision of Instruction and Curriculum (3) Fall, Spring

Prerequisites: Education 560 and successful teaching experience. With epartment approval Education 560 and 563 may be taken concurrently. rief history of the rise and development of supervision; relationship f supervision and administration; interpretation of concepts and tech- iques of modern supervision including effective communication.

55A-B Field Work in Elementary School Administration and Supervision (2-2) Year course

Prerequisite: Admission by application. Direct participation in the lministrative, supervisory, and curricular aspects of elementary school lministration and supervision. Field work extends over the entire school ear with initial registration made in the fall semester and reregistration the spring.

56A-B Field Work in Secondary School Administration and Supervision (2-2) Year course

Prerequisite: Admission by application. Direct participation in the lministrative, supervisory, and curricular aspects of secondary school lministration and supervision. Field work extends over the entire school ear with initial registration made in the fall semester and reregistration the spring.

59 Workshop for Training Teachers and Supervisors (2)

Prerequisites: Possession of an elementary and/or secondary creden- al; service or appointment to serve, as a master teacher, or supervisor student teachers. Designed to fill the special needs of training teachers sponsible for the supervision of student teachers in off-campus schools. xamination of techniques necessary to an effective supervisory pro- am for associate teachers.

0 Organization and Administration of Elementary Schools (3) Fall, Spring

Study and evaluation of the organization and administration of ele- entary schools; origin and development of general principles and

practices; relationship and interaction with other adminstrative un
with specific emphasis on the local district unit; specific practices a
policies of administering and supervising staff, instructional activiti
noninstructional activities, relationships and interaction with oth
community agencies; trends and developments in modern elementa
education.

572 **School Law and Public School Organization** (3) Fall, Sprin
Organization and legal aspects of federal, state, county, and distri
school administration; division of responsibility between school boar
and administrators; legal rights, duties, and responsibilities of scho
districts, officers, employees, pupils, and parents.

573 **School Finance and Business Management** (3) Fall, Spring
Theory and practice of financing public education; development
guiding principles in educational finance; trends and needs in local, sta
and federal participation in school support. Local operating procedu
of budgeting, accounting and auditing of school funds; purchasing, di
tribution and management of supplies; planning, maintenance, and oper
tion of school plant.

576 **Organization and Administration of Secondary Schools** (3)
Fall, Spring
Study and evaluation of the organization and administration
secondary schools; origin and development of general principles ar
practices; relationship and interaction with other administrative uni
with specific emphasis on the local district unit; specific practices ar
policies of administering and supervising staff, instructional activitie
noninstructional activities, relationships and interaction with other con
munity agencies; trends and developments in modern secondar
education.

577 **Personnel Problems in School Administration** (2)
Analysis of major administrative problems relative to employed pe
sonnel in the public school; selection and placement of employees, cond
tions of service, teacher and employee tenure, retirement provision
salary schedules, personnel records and reports, legal aspects of personn
problems, professional ethics, teacher-certification, in-service trainin
and professional organizations.

579 **School Building Planning** (2) Fall, Spring
Problems related to the financing of school construction; relatio
of community sociological and economic factors to site solution an
the master plan for the school plant; relationship between the instruc
tional program and the development of school buildings; working rela
tionships of personnel involved in the planning and constructing o
school buildings; administration of the school construction project in
cluding bids, contracts, and insurance.

80 **Seminar in Techniques of Counseling** (3) Fall, Spring
Prerequisites: Education 480 and Psychology 430. Advanced course n counseling techniques; study of counseling problems and situations; nalysis of recorded interviews; demonstrations and practice in coun- ling.

81 **Seminar in Pupil Personnel Services** (3) Fall, Spring
Prerequisite: Education 480. See Education 586A. Comprehensive udy of the organization, administration, and evaluation of pupil per- onnel services.

82 **Seminar in Guidance** (3) Fall, Spring
Prerequisites: Education 580, Psychology 430, and consent of instruc- or. See Education 586B. Intensive study of case data, current research, ources and uses of educational, vocational, and personal information as pplied to school-age pupils.

85 **Seminar in School Child Welfare Services** (3) Fall, Spring
Prerequisites: Education 485 and consent of instructor. See Education 86B. Social services in the school; special tools and techniques needed or school social service. Procedural problems in home visitations, parent onferences, the interview, and recording. School referral procedures nd agency-school relationships.

86A-B **Field Work in Pupil Personnel Services** (2-2) Fall, Spring
Prerequisite: Admission by application. See section on field work nder GPPS credential. Education 581 must be taken concurrently with 86A; Education 582 or 585 must be taken concurrently with 586B. upervised field training in organized program for those specializing in upil personnel services at either elementary or secondary level.

88 **Problems and Practices in Special Education** (2) Fall, Spring
Prerequisite: Education 488. Problems of organization, administration, nd supervision of various types of special education programs. Evalu- tion of recent, proposed, and needed legislation. Review of current terature. For advanced students and administrators of special education rograms.

89A **Principles of Rehabilitation** (3) Fall
Prerequisite: Consent of instructor. Orientation to vocational reha- ilitation; historical, legal, and administrative aspects of rehabilitation; rganization of rehabilitation services; overview of knowledges and kills needed by rehabilitation counselors; visits to local rehabilitation gencies. Should be followed by Education 589B which continues to utline the scope, philosophy and competencies of rehabilitation coun- ling.

89B **Rehabilitation Counseling** (3) Spring
Prerequisites: Education 482A and consent of instructor. Techniques nd theories of rehabilitation counseling; use of community resources in ounseling; illustrative case studies; current issues in training and pro- ssional practice.

590 **Advanced Audio-Visual Techniques** (2) Fall, Spring
Intensive study of research, advanced techniques, and current practices in audio-visual education.

592 **Seminar in Rehabilitation Counseling** (3) Spring
Prerequisite: Consent of instructor. Systematic case studies draw from field work experience. Each student will be required to presen one case study to the seminar, and following group criticism, submit written report of the counseling case.

593 **Research in Transitional Work Programs in Rehabilitation** (3) Spring
Prerequisite: Consent of instructor. Programs of work therap in hospitals, rehabilitation centers, and sheltered workshops. Specia attention will be given to the organization, staffing, and work procurement in sheltered workshops. The student will be required to develo a project in the field of his special interest.

594 **Seminar in Psychological Aspects of Disability** (3) Fall
Prerequisite: Consent of instructor. Social-psychological aspects o disability. Individual perceptions of illness and disability. Basic mechanisms and motivation and their relationship to recovery. The effect o self-image of a variety of disabilities.

595A-B **Field Work in Rehabilitation Counseling** (3-9) Fall, Spring
Prerequisite: Consent of instructor. Supervised professional experience in two or three agencies will be provided to fit the individua needs of the student. Each unit of field work requires approximatel 50 hours per semester spent in professional work as the student's fiel assignment. The deadlines for filing an application for field work wit the supervisor of field relations are: *August 1* for the *fall* semester an *December 1* for the *spring* semester.

598 **Seminar in School Administration and Supervision** (3) Fall, Spring
Prerequisites: Completion of at least 20 semester hours of graduat work including all specific requirements for field work. Recommended for all candidates completing the master's program in school administration and supervision. Techniques of investigation into educational processes and problems with stress upon critical and selective reading from a variety of sources. Emphasis is placed upon the processes and problem of personnel administration.

599A-B **Graduate Project** (1-2) Fall, Spring
In 599A the student will develop a tentative proposal for the master' project. In 599B the project will be completed with the guidance of a faculty adviser. Students must complete Education 500 or 599A befor taking 599B. Enrollment limited to students who have been approved for candidacy for a master's degree in education.

ENGINEERING

(In the Division of Technical Sciences)

TAFF: Cromwell (Department Head), Mann, Plumtree, Risse and Storch (Area Co-ordinators), Andreoli, Bouse, Epstein, Giroux, Haberman, Hansalik, Hayworth, Hirsch, Kopp, Levine, Reisman, Schug, Schwartz, Sikand, Silver. *Part-time:* Andres, Baer, Bradley, Cipriano, Duncan, Eggers, Flynn, Geselbracht, Gould, Leung, Johnson, MacDonough, Pudewa, Rubin, Rubinstein, Sonderling, Solomon, Soule.

To meet the needs of industry for engineering personnel, the Los ngeles State College offers a broad engineering program leading to B.S. in engineering. Technical elective courses are available in mechan-al, electrical, and civil engineering. Courses are also available in indus-rial plumbing (sanitary) engineering and industrial management.

Instruction is provided in the basic sciences and in engineering meth-ds, processes, materials, machinery, and structures. Classroom instruc-ion may be supplemented by practical engineering experience in the ork-study program which is an integral part of the engineering cur-iculum.

BACHELOR'S DEGREE CURRICULUM

All students are required to take a common core of lower and upper ivision courses. Technical electives offered permit choice of engineer-ng subjects suited to the professional objectives of the students. The egree requires 132 units.

ower Division

Mathematics 100, 201, 202, 203	12–16 units*
Physics 201, 202, 203–General Physics I, II, III	12 units
Chemistry 101–General Chemistry	5 units
Engineering 100–Engineering Drawing	2 units
Engineering 101–Descriptive Geometry	2 units
Engineering 102–Materials of Engineering	2 units
Engineering 201–Statics	3 units
Engineering 206–Orientation Laboratory	1 unit
Electives in engineering or science	5 units†
Chemistry 102–General Chemistry (5)	
Engineering 200–Engineering Processes (3)	
Engineering 202–Plane Surveying (3)	
Engineering 204–Machine Drafting (2) *or*	
Engineering 205–Construction Drafting (2)	
(Or an appropriate science or math course)	
	48 units

pper Division

The basic requirements are 27 units of required lecture courses plus ve units of required laboratories and 18 units of technical electives. All

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Students who satisfy Mathematics 100 by examination are required to take only Math. 201, 202, and 203. They may use the additional four units as electives.

Engineering 202 and 205 are prerequisites for Civil Engineering upper division courses.

engineering students are required to consult with an adviser in th engineering department before registration.

The required lecture courses are:

Engineering 300–Principles of Electric Circuits	3 units
Engineering 301–Dynamics	3 units
Engineering 302–Strength of Materials	3 units
Engineering 303–Fluid Mechanics	3 units
Engineering 305–Thermodynamics	3 units
Engineering 307–Principles of Electric Systems	3 units
Engineering 309–Engineering Analysis	3 units
English 306–Technical Report Writing	3 units
Mathematics 302–Advanced Engineering Mathematics	3 units

The required laboratory courses are:

Engineering 310–Electric Circuits Lab.	1 unit
Engineering 312–Strength of Materials Lab.	1 unit
Plus three of the following	3 units

- Engineering 313–Fluid Mechanics Lab. (1)
- Engineering 314–Electric Machines Lab. (1)
- Engineering 315–Heat Power Lab. (1)
- Engineering 317–Electric Devices Lab. (1)
- Engineering 440–Electronics Lab. (1)
- Engineering 441–Electric Communications Lab. (1)

Technical Elective Courses are available as follows (18 units required)*

Mechanical Engineering Courses

- Engineering 401–Kinematics of Mechanisms (3)
- Engineering 403–Principles of Aerodynamics (3)
- Engineering 404–Principles of Turbo-machinery (3)
- Engineering 405–Industrial Heat Transfer (3)
- Engineering 406–Applied Thermodynamics (3)
- Engineering 413–Elements of Machine Design (3)
- Engineering 414–Machine Design (3)
- Engineering 415–Heating and Ventilating (3)
- Engineering 416–Air Conditioning and Refrigeration (3)
- Engineering 417–Introduction to Chemical Engineering (3)
- Engineering 420–Power Plants (3)

Electrical Engineering Courses

- Engineering 430–Advanced Circuit Analysis (3)
- Engineering 431–Electric Communications (3)
- Engineering 432–Theory of Power Transmission Lines (3)
- Engineering 433–Electric Power System Analysis (3)
- Engineering 434–Electric Machines (3)
- Engineering 435–Electronics (3)
- Engineering 436–Semiconductor Electronics (3)
- Engineering 437–Electric and Magnetic Waves (3)
- Engineering 438–Servomechanism Systems (3)
- Engineering 439–Nonlinear Electronics (3)

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* Technical electives must be selected from approved major field sequences. Deviations fro previously approved fields will require the approval of the Engineering Student Advisin Committee.

Civil Engineering Courses

Engineering 460—Structural Analysis (3)
Engineering 461—Structural Design (3)
Engineering 462—Analysis of Indeterminate Structures (3)
Engineering 463—Reinforced Concrete (3)
Engineering 465—Specifications and Cost Estimating (3)
Engineering 466—Soil Mechanics (3)
Engineering 467—Foundations (3)

Industrial Plumbing (Sanitary) Engineering Courses

Engineering 480—Plumbing Engineering (3)
Engineering 481—Water Treatment and Sewage Disposal (3)

Other Courses in Engineering

Engineering 398—Work Study (3)
Engineering 490—Engineering Applications of Digital Computers (3)
Engineering 495—Introduction to Nuclear Engineering (3)
Engineering 499—Independent Study (1-3) (Requires permission of Head of Engineering Department)

Other Departments

Economics 300—Economics for Engineers (3)
Math. and Science: Any 400 course with consent of engineering advisers
Business: Industrial Management courses and other courses with consent of adviser
Microbiology 360—Sanitary Bacteriology (3)

50 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR ENGINEERING MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
ath. 100—Basic Math. Anal.	4*	Math. 201—Anal. Geom. & Calc. I	4
ıem. 101—Gen. Chem.	5	Physics 201—Gen. Physics I	4
ıgr. 100—Engr. Drawing	2	Engr. 101—Descriptive Geom.	2
ıgr. 102—Materials of Engr.	2	Bio. Sci. 153—Prin. of Bio. I	3
ngl. 150—Written Expr. *or*		‡Sp. 150—Oral Expr. *or*	
ıng. Arts 150A	3	Lang. Arts 150B	3

SOPHOMORE YEAR

ath. 202—Anal. Geom. & Calc. II	4	Math. 203—Anal. Geom. & Calc. III	4
ıysics 202—Gen. Physics II	4	Physics 203—Gen. Physics III	4
ych. 150—Human Behavior	3	Engr. 201—Statics	3
ıem. 102—Gen. Chem. *or*		Engr. 206—Orientation Lab.	1
Engr. *or* Sci. electives	5	Govt. 150—Govt. & Am. Soc.	3
		Phys. Educ. 150	1

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ee prior note on Math. 100.

he sequence of taking engineering required courses will depend on the option, and the technical electives which the student intends to take. For example, students who elect electrical engineering as an option should complete Engr. 300, 304, and 307 in the junior year. Likewise, students who elect the mechanical or civil options should take their mechanics or thermodynamics courses prior to Engr. 304 and 307.

ee "Note" on page 55.

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Unit*
Engr. 300—Prin. of Elec. Circuits	3	Engl. 250—Understanding Lit.	3
Engr. 301—Dynamics	3	Hist. 250—U.S. History	3
Engr. 302—Strength of Materials	3	Engr. 309—Engr. Analysis	3
Engr. 310—Circuits Lab.	1	Laboratory electives	2
Engr. 312—Strength of Materials Lab.	1	Engr. requirements from the following	6
Math. 302—Adv. Engr. Math.	3	Engr. 303, Engr. 305, Engr. 307	
Engl. 306—Tech. Report Writing	3		

SENIOR YEAR

Engr. requirements	3	Technical electives	9
Choose from:		Laboratory electives	1
Engr. 307—Prin of Elect. Syst. (3)		Phys. Educ. elective	1
Engr. 303—Fluid Mech. (3)		Gen. Educ. Soc. Sci. elective	3
Technical electives	9	Phil. 150—Phil. Ideas	3
H&S 350—Personal Health	2		
Art 150—Art, Music, Dance	3		

PREPARATION FOR GRADUATE WORK

Students planning advanced study elsewhere are encouraged to selec appropriate courses with guidance of engineering faculty from th following:

Advanced Engineering Mathematics.
Physical Chemistry
Physics

COURSES OF INSTRUCTION *

100 Engineering Drawing (2) Fall, Spring
Preparation of simple working drawing; use and care of drafting instruments; orthographic and isometric projections; auxiliary views. Six hours laboratory.

101 Descriptive Geometry (2) Fall, Spring
Prerequisites: Engineering 100 and Plane Geometry. Basic projection principles of point, line, and plane. Graphical solution of space problems including practical engineering application. Six hours laboratory.

102 Materials of Engineering (2) Fall, Spring
Production, composition, and properties of important nonmetals, metals, and alloys. Two hours lecture.

200 Engineering Processes (3)
Study of modern manufacturing processes; machine tools; welding, gas and electric; pattern making; castings; jigs and fixtures; introduction to production analysis and quality control and inspection methods. Two hours lecture; three hours laboratory.

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* Some courses which are in a state of transition will be offered according to the 1959-60 Catalog. Department Advisers should be consulted.

01 Statics (3) Fall, Spring
Prerequisites: Physics 201 and Mathematics 202. Fundamental prin-
iples of statics; resolution and composition of forces; algebraic and
raphic solutions; friction; center of gravity; moment of inertia. Three
ours lecture.

02 Plane Surveying (3) Fall
Prerequisites: Trigonometry. Principles and practices of measurement
f distances, directions, elevations. Use and care of level, transit, plane
ıble. Mapping practice and symbols. Two hours lecture; three hours
ıboratory.

04 Machine Drafting (2)
Prerequisite: Engineering 100. Conventions; details; assembly draw-
ıgs; drawing from sketches; elementary design of machine parts. Six
ours laboratory.

05 Construction Drafting (2)
Prerequisite: Engineering 100. Architectural drafting, convention and
mbols; detailing of building drawings; layouts of piping for steam,
ater, air and waste. Six hours laboratory.

06 Orientation Laboratory (1)
Elementary measurements; principles of safety of equipment and per-
nnel; laboratory techniques; laboratory data; laboratory workbook
ıd report; laboratory standards. Three hours laboratory.

0 Principles of Electric Circuits (3) Fall, Spring
Prerequisite: Physics 203. Corequisite: Mathematics 302. Electric cir-
it components; the electric circuit defined; Ohm's and Kirchhoff's
ws and their applications to circuit analysis; Thevenin's, Norton's,
perposition and maximum power transfer theorems and their applica-
ns to circuit reduction; circuit representation by impedance, admit-
nce and hybrid parameters; complex alegbra, AC circuits and their
eady state solutions. Three hours lecture.

1 Dynamics (3) Fall, Spring
Prerequisite: Engr. 201. Fundamental principles of kinetics; rectilinear
ıd curvilinear motion; translation and rotation; work, power, impulse,
omentum, and impact. Three hours lecture.

2 Strength of Materials (3) Fall, Spring
Prerequisite: Engr. 201. Stresses and deformations in tension, com-
ession and shear; torsion; riveted joints; simple beams and theory of
xure; deflections of beams; columns. Three hours lecture.

3 Fluid Mechanics (3) Fall, Spring
Prerequisite: Engr. 301. Properties of fluids compressible and in-
mpressible; fluid statics; laminar and turbulent flow; flow in pipes
ıd open channels; fluid measurements; impulse and momentum; pumps
ıd turbines. Three hours lecture.

305 Thermodynamics (3) Fall, Spring
Prerequisites: Math. 202, Physics 202. Equation of state; energy equa tions; thermodynamics properties of substances; cycles; air compressior internal combustion engines. Three hours lecture.

307 Principles of Electric Systems (3) Fall, Spring
Prerequisites: Engineering 300. Corequisites: Engineering 309 and 31 Electron ballistics; gas discharge phenomena; electrons in solids; introduction to solid state physics; idealization of physical systems; linear approximation methods for nonlinear elements and circuits; graphic techniques; DC transient theorems; magnetic circuits; transformer balanced three-phase circuit analysis. Three hours lecture.

309 Engineering Analysis (3) Fall, Spring
Prerequisite: Mathematics 302. Clarification, definition and analysis of mechanical, electrical and electro-mechanical systems; use o analogs; classical integro-differential equations method; methods o system analysis which account for variations of system parameters an their effects; elements of the Laplace transform and its use for th solution of system equations. Three hours lecture.

310 Electric Circuits Laboratory (1) Fall, Spring
Prerequisite: Engr. 300. (May be taken concurrently.) Experiment based on Engr. 300. Three hours laboratory.

312 Strength of Materials Laboratory (1) Fall, Spring
Prerequisite: Engr. 302. (May be taken concurrently.) Tests of materials of construction in tension, compression, bending and torsion. Determination of physical properties of wood, steel, concrete and other materials. Hardness tests. Three hours laboratory.

313 Fluid Mechanics Laboratory (1) Fall, Spring
Prerequisite: Engr. 303. Flow through orifices, nozzles, meters, an pipes and over weirs; water hammer; friction; pumps and turbine Three hours laboratory.

314 Electric Machines Laboratory (1) Fall, Spring
Prerequisites: Engr. 310 and Engr. 434, (Engr. 434 may be take concurrently.) Experiments based on Engr. 434. Three hours laborator

315 Heat Power Laboratory (1) Fall, Spring
Prerequisites: Engr. 406. (May be taken concurrently.) Calibratio and use of instruments; heating value of fuels; flue gas analysis; stear generator, engine and turbine tests; internal combustion engine an air compressor tests. Three hours laboratory.

317 Electric Devices Laboratory (1) Fall, Spring
Prerequisites: Engr. 307 and Engr. 310. (May be taken concurrentl with Engr. 307.) Experiments based on Engr. 307. Three hours laboratory.

98 **Work-Study Assignments and Reports** (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study rogram. Analysis and reports of the students' performance; regular roup meetings.

TECHNICAL ELECTIVES

Mechanical Engineering

01 **Kinematics of Mechanisms** (3) Fall, Spring
Prerequisites: Engr. 301 and 302. Transmission of motion; theory of echanisms; linkages; gears; cams; belts; chains. Three hours lecture.

03 **Principles of Aerodynamics** (3) Spring
Prerequisite: Engineering 303. Airfoil characteristics; incompressible ow in subsonic, transonic and supersonic regimes; power considera-ons; propellers; airplane performance and stability. Three hours lecture.

04 **Principles of Turbomachinery** (3) Fall
Prerequisites: Engineering 303 and Engineering 406. General treat-ent of all forms of turbomachines. Dimensional analysis, energy trans-er, thermodynamics of compressible flow and the flow of fluids in the assages and over the blades of turbomachines, application to pumps, ompressors, hydraulic, gas and steam turbines. Three hours lecture.

05 **Principles of Industrial Heat Transfer** (3) Fall
Prerequisites: Engineering 305 and Mathematics 302. Study of the asic principles of heat transfer and their application to the design f industrial equipment. Problems in steady state and transient con-uction solved by analytical, numerical and analog methods. Free and orced convection. Radiant heat transfer. Three hours lecture.

06 (306) **Applied Thermodynamics** (3) Fall, Spring
Prerequisite: Engineering 305. Application of thermodynamic prin-iples; steam generators, engines and turbines; combustion; vapor cycles; efrigeration; mixtures of vapors and gases; internal combustion engines.

13 **Elements of Machine Design** (3) Fall, Spring
Prerequisites: Engr. 302 and 401. (Engr. 401 may be taken concur-ently.) Application of principles of mechanics, properties of materials, nd fabrication processes to the design of simple machines and struc-ural elements. Three hours lecture.

14 **Machine Design** (3) Fall, Spring
Prerequisite: Engr. 413. Continuation of Engr. 413 to include design f unit assemblies and machines with regard to suitability of materials, ıfety, lubrication, construction, etc. Three hours lecture.

415 Heating and Ventilating (3) Fall, Spring
Prerequisites: Engr. 305 and 406. Psychometric properties of air; human comfort; heat transfer; heat losses from buildings; heating equipment and systems; steam; hot water; air; ventilation requirements and systems; design of duct systems; residential and industrial applications. Three hours lecture.

416 Air Conditioning and Refrigeration (3) Fall, Spring
Prerequisites: Engr. 303 and 305. Air and humidity calculations; fluid flow and air-distribution systems; principles of refrigeration; refrigeration and air-conditioning equipment; complete study of residential and industrial applications including plumbing aspects. Three hours lecture.

417 Introduction to Chemical Engineering (3) Spring
Prerequisites: Chemistry 102 and Engineering 305.
Corequisite: Engineering 406 and a course in organic or physical chemistry, or consent of the instructor. Study of the basic operations in the process industries. Problems in design and operations of processing equipment. Analysis of each operation based on thermodynamics and momentum, heat and mass transfer concepts. Three hours lecture.

420 Power Plants (3) Spring
Prerequisites: Engr. 406. Power plant equipment; steam generators, engines, turbines, condensers, internal combustion engines and other prime movers; load curves; economic selection; cycles and heat balances; design procedure. Three hours lecture.

Electrical Engineering

430 Advanced Circuit Analysis (3) Fall, Spring
Prerequisite: Engineering 307. Unbalanced three-phase circuit analysis; feedback; low and high Q tuned circuits; coupled circuits; double- and staggered-tuned circuits; the complex frequency plane and impedance representation; filter synthesis and analysis. Three hours lecture.

431 Electric Communications (3) Fall, Spring
Prerequisite: Engineering 430.
Corequisite: Engineering 439. Baseband and carrier communication systems; amplitude modulation; frequency modulation; pulse modulation; other modulation systems; signals and their spectra; information capacity, noise and bandwidth of voice, video, data-handling and other communication systems; typical circuitry. Three hours lecture.

432 Theory of Power Transmission Lines (3) Fall
Prerequisites: Engineering 307 and Engineering 430. (May be taken concurrently.) Function and structure of power systems; transmission lines; inductance, capacitance, resistance, current and voltage relations; generalized circuit constants; circle diagrams. Three hours lecture.

3 **Electric Power System Analysis** (3) Spring
Prerequisites: Engineering 432 and Engineering 434. Representation power systems; symmetrical components; short circuits on machines ıd systems; system protection; elements of system stability. Three ours lecture.

4 **Electric Machines** (3) Fall, Spring
Prerequisite: Engineering 307. Principles, construction, characteristics, ıd applications of direct-current generators and motors, and alter- ıting-current induction and synchronous machines. Three hours lec- re.

5 **Electronics** (3) Fall, Spring
Prerequisite: Engineering 307 and consent of instructor. Diode—ideal, tual, use as a rectifier and detector, gas, selenium, silicon; power pplies—efficiency, ripple, regulation, voltage doublers, choke and ca- ıcity input filters; multiphase power supplies; controlled rectification ements—thyratron, ignitron, three layer diode; multielement vacuum bes and transistors—the meanings of their characteristics, parameters ıd equivalent circuits as derived from the material presented in En- neering 300; linear class A operation; linear single ended class B opera- on; push-pull operation; input and output impedance. Three hours cture.

6 **Semi-Conductor Electronics** (3) Fall, Spring
Prerequisite: Engineering 307. Physics of semiconductors; methods manufacture and analysis of the product; survey of semiconductor plications; junction diode; transistor as a circuit element; transistor ap- ications; transistor circuit stability problems and solutions. Practical plications. Three hours lecture.

7 **Electric and Magnetic Waves** (3) Fall, Spring
Prerequisites: Engineering 309 and Engineering 430. Electric and agnetic fields; plane electromagnetic waves; reflected waves; guided aves; transmission lines and wave guides; antennas. Three hours lec- re.

8 **Servomechanism Systems** (3) Fall, Spring
Prerequisite: Engineering 430. Definitions of open and closed loop stems; principles of closed loop systems; applications; static analysis; ynamic analysis; unique problems; unique solutions; modern analysis ethods. Three hours lecture.

9 **Nonlinear Electronics** (3) Fall, Spring
Prerequisite: Engineering 435 and consent of instructor. Tuned power nplifiers; power oscillators; pulse, digital and other nonlinear elec- onic circuits and applications. Three hours lecture.

440 Electronics Laboratory (1) Fall, Spring
Prerequisite: Engineering 435. (May be taken concurrently.) Experiments based on Engineering 435. Three hours laboratory.

441 Electromagnetics Laboratory (1)
Prerequisite: Engineering 317.
Corequisite: Engineering 437 and/or 431. Experiments in communication and microwave systems, largely based on Engineering 431 and 437 Three hours laboratory.

Civil Engineering

460 Structural Analysis (3) Fall, Spring
Prerequisite: Engr. 302. Analysis of simple structures; beams, tension and compression members; analysis of bridge and roof trusses and of building frames. Three hours lecture.

461 Structural Design (3) Fall, Spring
Prerequisite: Engr. 460. Design of structural members including tension and compression members, beams, and built-up girders, together with connections. Framing and design of simple bridges, buildings, and frameworks in metal. Codes and specifications of various organizations used as reference. Two hours lecture; three hours laboratory.

462 Analysis of Indeterminate Structures (3) Fall, Spring
Prerequisite: Engr. 460. Analysis of statically indeterminate structures by classical and modern methods; continuous beams, rigid frames trusses, arches; applications of superposition and influence lines; methods of minimal principles slope deflection, moment distribution. Three hours lecture.

463 Reinforced Concrete (3) Fall, Spring
Prerequisite: Engineering 460. Theory and design of plain and reinforced concrete structures; design of mixes; beams; tee-beams; floors; columns; footing. Three hours lecture.

465 Specifications and Cost Estimating (3) Fall
Building specification and codes: estimating costs; material handling and transportation; excavation; concrete, wood, masonry, and steel construction. Three hours lecture.

466 Soil Mechanics (3) Fall
Prerequisites: Engineering 302 and Engineering 303. Physical and mechanical properties of soils, classification, permeability, seepage, capillarity, consolidation, settlement, stresses, pressures, strength theories, testing methods. Three hours lecture.

467 Foundations (3) Spring
Prerequisites: Engineering 466. Types, spread footings, piles, caissons, retaining walls, cofferdams, dams, factor of safety. Three hours lecture.

Plumbing Engineering

30 Plumbing Engineering (3) Fall
Prerequisite: Engr. 303 or permission of instructor. Hydraulics and eumatics; water supply and consumption; pumps and storage tanks; sign and layout of piping; fire protection and sprinkler systems; drain d vent pipes; sewage and drain pumps; valves, meters, and fixtures; umbing codes. Three hours lecture.

31 Water Treatment and Sewage Disposal (3) Spring
Water supply and purification; operation and control of water treat- ent plants; sewage treatment and disposal; sewer systems. Three hours cture.

SPECIAL COURSES

90 Engineering Applications of Digital Computers (3) Fall, Spring
Prerequisite: Senior standing in engineering. Introduction to the eory, construction, and use of high-speed digital computers in the lution of engineering problems. Two hours lecture; three hours lab.

95 Introduction to Nuclear Engineering (3) Spring
Prerequisite: Senior standing in engineering plus a course in nuclear hysics or Physics 301. Introduction to basic engineering principles in- olved in the design of nuclear reactors; review of nuclear physics re- uired for engineering applications; diffusion of neutrons; reactor echanics, radiation shielding; materials of construction; reactor in- rumentation and control. Three hours lecture.

99 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to sume responsibility for independent work and to prepare written and ral reports. Project selected in conference with sponsor before registra- on; progress meetings held regularly.

ENGLISH

(In the Division of Language Arts)

STAFF: Guyer (Department Head), Amneus, Beckwith, Bird, Bloom, Bushma Collins, Coulette, Cronin, Fick, Friedman, Fruman, Hodgman, Laird, Lase Leary, Marcus, Motherwell, Munro, Rathbun, Sandelin, Shroyer, Swerdlo Ward, Williams, Young, Zall.

BACHELOR'S DEGREE CURRICULA

Major in English

See also page 53 for B.A. degree requirements.

Designed for students who: (1) elect to study the liberal arts wit emphasis in literature and language; or (2) plan to pursue careers i writing. The student undertaking the English major must request assignment of an adviser at the Division of Language Arts office when h begins courses in this major. English majors are strongly urged t acquire command of at least one foreign language.

Lower Division

English 260—Analysis and Appreciation of Literature .... 3 unit

Upper Division

English 405—Modern English Grammar .... 3 unit
English 406—Communication of Ideas (3) *or*
English 408W-X-Y-Z—Creative Writing .... 3 unit
English 440—Critical Approaches to Literature .... 3 unit

At least *two* courses from the following .... 6 unit
  English 417—Interpreting Shakespeare (3)
  English 426—Modern British Drama (3)
  English 460—The Age of Chaucer (3)
  English 461—Dramatic Literature of the English Renaissance (3)
  English 463—The English Renaissance (3)
  English 465—The Age of Reason (3)
  English 466—The British Novel: Richardson to Joyce Cary (3)
  English 467—The Romantic Age (3)
  English 468—The Victorian Age (3)
  English 469—Twentieth Century British Literature (3)

At least *two* courses from the following .... 6 units
  English 427—Modern American Drama (3)
  English 470—Masters of American Literature, 1620-1860 (3)
  English 471—Masters of American Literature, 1860-1960 (3)
  English 472—Twentieth Century American Literature (3)
  English 473—The American Renaissance (3)
  English 474—Major American Novelists: Cooper to James (3)
  English 475—Major American Novelists: Crane to Faulkner (3)

At least *one* course from the following .... 3 units
  English 424—Greek and Roman Drama (3)
  English 425—Modern Continental Drama (3)
  English 480—Literature and the Fine Arts, B.C. (3)

English 481—Literature and the Fine Arts, A.D. (3)
English 482—Bible as Literature (3)
English 484—Contemporary World Literature (3)
English 485—Literature and Human Values (3)
English 486—The Continental Novel (3)

At least *three* courses from those in the 400's in English .... 9 units
American Studies 402 and Language Arts 410 may also be included. The English major must have the approval of his departmental adviser for courses chosen under this requirement.

36 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR ENGLISH MAJORS

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
ngl. 150—Writ. Expr. *or* ang. Arts 150A—Oral & Written Commun.	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B—Oral & Written Commun.	3
ovt. 150—Govt. & Amer. Soc.	3	Hist. 250—U. S. History	3
nthro. 150—Cultural Anthro.	3	Bio. Sci. 153—Prin. of Bio. I	3
sych. 150—Human Behavior	3	Art 150—Art, Music, Dance	3
hil. 150—Logic	3	Elective	3

SOPHOMORE YEAR

ngl. 250—Underst. Lit.	3	Engl. 260—Analysis and Appreciation of Lit.	3
hys. Sci. 151—Prin. of Phys. Sci. I	3	Bio. Sci. 154—Prin. of Bio. II *or* Phys. Sci. 152—Prin. of Phys. Sci. II	3
hil. 150—Phil. Ideas	3	General Educ. elective	3
hys. Educ. 150	1	Phys. Educ. elective	1
lectives	6	Electives	6

JUNIOR YEAR

ngl. 405—Modern English Gram.	3	One of the following Engl. 427, 470, 471, 472, 473, 474, 475	3
ngl. 406—Comm. of Ideas *or* ngl. 408W—Creative Writ.	3	One of the following Engl. 417, 426, 460, 461, 463, 465, 466, 467, 468, 469	3
ne of the following Engl. 424, 425, 480, 481, 482, 484, 485, 486	3	H & S 350—Personal Health	2
ne of the following Engl. 427, 470, 471, 472, 473, 474, 475	3	Electives	8
lectives	4		

SENIOR YEAR

ne of the following Engl. 417, 426, 460, 461, 463, 465, 466, 467, 468, 469	3	Engl. 440—Critical Appr. to Lit.	3
lectives	6	Elective in English	3
lectives in English	6	Electives	9

ngl. 150 and Sp. 150 in either order make a sequence; Lang. Arts 150 A and B make a separate sequence. Lang. Arts 150 A *or* B may *not* be combined with Engl. 150 or Sp. 150.

General Secondary Teaching Major

Designed for candidates for the general secondary credential in English. The student must request assignment of an adviser at the Division of Language Arts office when he begins courses in the teaching major. The student must meet the following requirements:

1. Professional education requirements. See page 140.
2. Completion of the major in English including English 406.
3. In addition to the major the student must take Speech 464 *or* Journalism 464.
4. Graduate (fifth year). At least two English courses approved by the departmental adviser. American Studies 402 and Language Arts 410 may be taken under this requirement.

SUGGESTED COURSE SEQUENCE FOR ENGLISH MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR AND SOPHOMORE YEAR SAME AS FOR ENGLISH MAJOR

First semester	*Units*	*Second semester*	*Units*
JUNIOR YEAR			
Engl. 405—Mod. Engl. Gram.	3	Electives in English	6
Engl. 406—Commun. of Ideas	3	One of the following	3
One of the following	3	Engl. 427, 470, 471, 472, 473, 474, 475	
Engl. 427, 470, 471, 472, 473, 474, 475		One of the following	3
One of the following	3	Engl. 417, 426, 460, 461, 463, 465, 466, 467, 468, 469	
Engl. 424, 425, 480, 481, 482, 484, 485, 486		Minor	2
Minor	4	H&S 350—Personal Health	2
Educ. 300—Intro. Cred. Prog.	N.Cr.		
SENIOR YEAR			
One of the following	3	Engl. 440—Critical Appr. to Lit.	3
Engl. 417, 426, 460, 461, 463, 465, 466, 467, 468, 469		Electives in English	3
		Educ. 471—Sec. Educ.	5
Minor	6	Educ. 480—Counsel. & Guid.	2
Educ. 413—Psych and Soc.	5	Educ. 490—Audio-Visual	2
Sp. 464—High Sch. Dramatics *or* Jour. 464—High Sch. Jour.	2		
FIFTH YEAR			
Electives in English	6	Educ. 444YZ—Directed Teach.	3
Educ. 493—Methods		Educ. 442—Prob. in Sec. Teach.	6
Major (2)		Minor	3
Minor (2)	4	Elective	3
Minor	6		

General Secondary Teaching Minor

For teaching credential requirements see also pages 140-141. Candidates for the teaching minor in English are required to have courses in each of these areas: composition, literature, speech, and journalism or drama. The student undertaking an English minor must request signment of an adviser at the Division of Language Arts office when begins courses in the minor.

ower Division

English 260–Analysis and Appreciation of Literature	3 units

pper Division

English 405–Modern English Grammar	3 units
English 406–Communication of Ideas	3 units
At least *one* of the following	3 units
English 417–Interpreting Shakespeare (3)	
English 426–Modern British Drama (3)	
English 460–The Age of Chaucer (3)	
English 461–Dramatic Literature of the English Renaissance (3)	
English 463–The English Renaissance (3)	
English 465–The Age of Reason (3)	
English 466–The British Novel: Richardson to Joyce Cary (3)	
English 467–The Romantic Age (3)	
English 468–The Victorian Age (3)	
English 469–Twentieth Century British Literature (3)	
At least *one* course from the following	3 units
English 427–Modern American Drama (3)	
English 470–Masters of American Literature, 1620-1860 (3)	
English 471–Masters of American Literature, 1860-1960 (3)	
English 472–Twentieth Century American Literature (3)	
English 473–The American Renaissance (3)	
English 474–Major American Novelists: Cooper to James (3)	
English 475–Major American Novelists: Crane to Faulkner (3)	
At least *one* course from the following	3 units
English 424–Greek and Roman Drama (3)	
English 425–Modern Continental Drama (3)	
English 480–Literature and the Fine Arts, B.C. (3)	
English 481–Literature and the Fine Arts, A.D. (3)	
English 482–Bible as Literature (3)	
English 484–Contemporary World Literature (3)	
English 485–Literature and Human Values (3)	
English 486–The Continental Novel (3)	
t least *one* course from those in the 400's in literature offered by the Department of English	3 units
	21 units

MASTER OF ARTS DEGREE

Graduate students considering this degree must request a depart-ental adviser by appearing at the Division of Language Arts office at e earliest possible opportunity.

1. Prerequisites: At least 24 units of approved courses in English, or performance on the Graduate Record Examination in English with a score which indicates the equivalent thereof. All graduate students who plan to study for the Master of Arts in English must take the Graduate Record Examination—Advanced Test in Literature in addition to the aptitude test of the Graduate Record Examination. English 405—Modern English Grammar, and English 440—Critical Approaches to Literature are specific prerequisites to English 505—Seminar in Language, and English 540—Seminar in Literary Criticism,

respectively. These prerequisite courses will be counted in the Master of Ar program only when the candidate has preliminary preparation in other sul jects in English which leaves room for English 405 and English 440 withou causing other serious inadequacies. The candidate must also furnish evidenc of ability to write in a style appropriate to the advanced student of languag and literature.

In addition to specific course prerequisites, the prospective candidat must meet the all-college requirements for advancement to candidac which are listed in the *Graduate Bulletin* obtainable from the Office o the Dean of Graduate Studies.

2. At least *five* courses in the 500 series in English, as follows:
   English 505—Seminar in Language .... 3 unit
   English 520—Seminar in Literature .... 3 unit
   English 540—Seminar in Literary Criticism .... 3 unit
   English 560—Seminar: Special Studies in Literature .... 3 unit
   English 562—Seminar: Significant Intellectual Movements: Their Effect on Literature .... 3 unit
3. At least six approved units outside the Department of English in a clearly related field .... 6 unit
4. At least nine units of electives .... 9 unit
   These are to be selected from those 400 series courses in the Department of English which constitute the most pertinent advanced study for the candidate. English 598—Graduate Independent Study may be advised on the basis of the candidate's performance on the Graduate Record Examination in literature. English 599—Graduate Project may be advised if, in the estimation of his adviser, the candidate merits the oportunity.
5. Comprehensive Examination
   This examination will ordinarily be in essay form and will require the student to bring a comprehensive knowledge of language, literature, and criticism to bear upon complex problems in his field.

COURSES OF INSTRUCTION

150 Written Expression (3) Fall, Spring (General Education)

Language as a tool of thought and co-operation; the relations betwee thinking, writing, reading, and speaking; practice in reading and collect ing information, and in organizing and presenting ideas in writing.

250 Understanding Literature (3) Fall, Spring (General Education)

First course in literature, designed to give the student experience o the general range, power, and human relevance of literary works, an knowledge of their special forms and techniques.

260 Analysis and Appreciation of Literature (3) Fall, Spring

Study of fiction, drama, and poetry with emphasis on their specia technical resources and achievements.

LANGUAGE AND COMPOSITION COURSES

These courses add to the foundation in language and literature the owledge and skill required of the members of various professions. pper division standing and satisfactory completion of a freshman com-osition course (or concurrent enrollment in English 150 or Language rts 150A or B) are prerequisites for all language and composition urses in the 400 series.

6 Technical Report Writing (3) Fall, Spring
Problems in scientific writing. Preparation of technical reports.

2W-X-Y-Z Statement (1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor who is faculty adviser of the *atement* staff. Membership on the editorial staff of the literary maga-ne of the college. Regular attendance at weekly staff meetings. May repeated for additional credit to a total of six units and may be taken addition to the normal study load.

0 History of the English Language (3) Fall
Prerequisites: English 150 or Language Arts 150AB and upper divi-on standing. The changes in vocabulary, grammar, and phonology hich English has undergone up to the present, and the manner in hich these changes reflect English and American culture.

1 American English Dialects (3) Fall, Spring
Prerequisites: English 150 or Language Arts 150AB and upper divi-on standing. Regional and social differences in pronunciation, gram-ar, and vocabulary of American English; historical causes of dialect fea-res and methods of linguistic geography.

5 Modern English Grammar (3) Fall, Spring
Structural approach to the grammar of English; comparison with tra-tional grammar.

6 Communication of Ideas (3) Fall, Spring
Logical and semantic analysis of problems in the communication of eas. Emphasis on advanced practice in reading, writing, and group scussion.

8W-X-Y-Z Creative Writing (3-3-3-3) Fall, Spring
Designed to develop knowledge and skill in the handling of literary rms.

9 English Structure and Usage (3) Fall, Spring
Prerequisites: English 150 or Language Arts 150AB, and English 405. dvanced study of English structure and usage.

10 High School Composition (3) Fall
Principles and techniques of composition applicable to high school udent writing.

411 Advanced Composition (3) Fall, Spring
Prerequisites: English 150 or Language Arts 150AB or demonstratio of competence in writing. Clear, coherent expository writing: principle and advanced applications.

INTERPRETATION COURSES

These courses develop criteria for the selection, analysis, evaluation and enjoyment of literature. They develop techniques for the explication of theme, analysis of structure, language, tone, and mood, an methods of relating a literary work to its own age and to the contemporary scene. Upper division standing and satisfactory completio of a freshman composition course (or concurrent enrollment in Englis 150 or Language Arts 150A or B) are prerequisites for all interpretatio courses.

421 Interpreting Fiction (3) Fall, Spring
Prerequisites: English 150 or Language Arts 150AB, and English 25 or its equivalent. Critical analysis of short stories and novels.

423 The Language and Nature of Poetry (3) Fall, Spring
Prerequisites: English 150 or Language Arts 150AB, English 250 o its equivalent, and upper division standing. Analysis of representativ poems in English; consideration of diction, metaphor and image, soun structure, and rhythm as elements of poetic statement.

430 Interpreting Children's Literature (3) Fall, Spring
Principles for evaluating children's literature. The role of literature i the child's education.

432 Popular Literature (3) Fall, Spring
Analysis of literature used in high schools and of contemporary literature of wide appeal: best sellers, paperbacks, and book club selections. Study of ways to improve understanding and appreciation of literature.

440 Critical Approaches to Literature (3) Fall, Spring
Prerequisite: English 260, senior standing, or consent of instructor. Study of major systems of critical thought in relation to works of imaginative literature.

ENGLISH LITERATURE COURSES

These courses emphasize the artistic achievement of representative British writers. Consideration is given to the artistic, ethical, and social values of each age and to their surviving influence. Satisfactory completion of English 260, or consent of instructor, is prerequisite to enrollment in all upper division courses in English literature.

417 Interpreting Shakespeare (3) Fall, Spring
Analysis of 12 to 15 plays as drama and poetry.

26 Modern British Drama (3) Fall

Major plays from Shaw to the present.

60 The Age of Chaucer (3) Fall (Offered 1960 and alternate years thereafter)

Study of selected works in Middle English with special emphasis on haucer.

61 Dramatic Literature of the English Renaissance (3) Spring (Offered 1962 and alternate years thereafter)

Prerequisite: Satisfactory completion of English 417. Tudor and icobean drama, exclusive of Shakespeare.

63 The English Renaissance (3) Fall

Study of nondramatic literature from 1550 to 1660 and of the cultural rces which helped to shape it.

65 The Age of Reason (3) Fall

Study of representative works from the Restoration through the ghteenth century.

66 The British Novel: Richardson to Joyce Cary (3) Spring (Offered 1960 and alternate years thereafter)

Selected novels by major British writers from the eighteenth century the present.

67 The Romantic Age (3) Spring

Study of the aesthetic, political, and philosophical ideas in the prose nd poetry of the major Romantic writers.

68 The Victorian Age (3) Spring

Study of the scientific, philosophical, aesthetic, and political thought the prose and poetry of the major writers of the age.

69 Twentieth Century British Literature (3) Spring

Study of nondramatic literature since 1900 and of the cultural forces hich helped to shape it.

AMERICAN LITERATURE COURSES

These courses emphasize the artistic achievement of representative merican writers. Consideration is given to the artistic, ethical, and cial values of each age and to their surviving influence. Upper division anding and satisfactory completion of a freshman composition course r concurrent enrollment in English 150 or Language Arts 150A or B) e prerequisites for registration in American literature courses.

27 Modern American Drama (3) Spring (Offered 1960 and alternate years thereafter)

Major plays from Eugene O'Neill to the present.

470 Masters of American Literature, 1620-1860 (3) Fall, Spring
Significant literary works and movements from the colonial era to the Civil War.

471 Masters of American Literature, 1860-1960 (3) Fall, Spring
Significant literary works and movements from the Civil War to the present.

472 Twentieth Century American Literature (3) Fall
Study of major writers and literary movements.

473 The American Renaissance (3) Spring
Prerequisite: Satisfactory completion of English 470 or consent of instructor. America's intellectual independence as expressed in the writings of Emerson, Whitman, Thoreau, and Emily Dickinson.

474 Major American Novelists: Cooper to James (3) Fall

475 Major American Novelists: Crane to Faulkner (3) Spring
Prerequisite: Satisfactory completion of a college-level course in literature. Study of selected works by outstanding American novelists.

WORLD LITERATURE COURSES

These courses emphasize the artistic achievement and influence of authors who have contributed significantly to world literature. Foreign works are read in translation. Upper division standing and satisfactory completion of a freshman composition course (or concurrent enrollment in English 150 or Language Arts 150A or B) are prerequisites fo all courses in world literature.

424 Greek and Roman Drama in Translation (3) Fall
(Offered 1960 and alternate years thereafter)
Greek and Roman classical drama.

425 Modern Continental Drama in Translation (3) Spring
(Offered 1961 and alternate years thereafter)
Significant plays from Ibsen to the present.

480 Literature and the Fine Arts, B. C. (3) Fall
Masterpieces of oriental, Greek and Roman literature, and their relation to major movements in thought and art.

481 Literature and the Fine Arts, A. D. (3) Spring
Masterpieces of western literature and their relation to major movements in thought and art. May be taken separately or in any sequenc with English 480.

482 Bible as Literature (3) Spring
Prerequisites: English 150 or Language Arts 150AB, and English 25 or its equivalent, and upper division standing. Extensive rather than intensive readings in the Old and New Testaments. Structure and characteristics of biblical narrative, poetry, biography, prophecy, epistle

and apocalyptic. Some consideration of cultural and historical backgrounds.

484 Contemporary World Literature (3) Fall
Masterpieces of western literature of the late nineteenth and twentieth centuries. Includes American, English, and European writers.

485 Literature and Human Values (3) Spring
Ways in which literature of other nations treats problems confronting the present generation.

486 The Continental Novel (3) Fall
(Offered 1961 and alternate years thereafter)
Major continental novelists. The writers studied may vary each semester.

SPECIAL STUDIES

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

490 Studies in Selected British Writers (3) Fall, Spring
Prerequisite: Senior standing and completion of one upper division course in English literature. Intensive study of major figures in English literature.

491 Studies in Selected American Writers (3) Fall, Spring
Prerequisite: Senior standing and completion of one upper division course in American literature. Intensive study of major figures in American literature.

499 Independent Study (1-3) Fall, Spring
Prerequisite: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Graduate standing is prerequisite to registration in the following courses.

505 Seminar in Language (3) Fall, Spring
Prerequisite: Satisfactory completion of English 405 or an equivalent course. Review of elements of English structure; further study with emphasis on the phonological basis of language. Problems of modern English usage and relevant historical background.

520 Seminar in Literature (3) Fall, Spring
Prerequisite: Completion of at least one upper division course in each of the following areas: English literature, American literature, world literature; or consent of the instructor. Advanced study of selected literary problems. Subject will vary each semester.

540 Seminar in Literary Criticism (3) Fall, Spring
Prerequisite: Satisfactory completion of English 440 or consent of instructor. Intensive study of techniques and problems of criticism, with attention to philosophical bases of major critical positions. Practice in explication, critical examination of literary texts, and the writing of criticism.

560 Seminar: Special Studies in Literature (3) Fall, Spring
Prerequisite: Same as for English 520. Advanced study of major literary movement or type; e.g., romanticism, or the literature of satire, or stream of consciousness in the novels of Proust, Joyce, Woolf, and Henry James. Subject will vary each semester.

562 Seminar: Significant Intellectual Movements: Their Effect on Literature (3) Fall, Spring
Prerequisite: Same as for English 520. Advanced study of writers and their work in their intellectual milieu; e.g., imagist poetry—its literary and ideological antecedents; or Calvinism and neo-Calvinism in America.

598 Graduate Independent Study (3) Fall, Spring
Directed reading, papers, and regular conferences.

599 Graduate Project (3) Fall, Spring
Prerequisites: Grade of B or better in a graduate course in English; evidence of ability to carry on independent study and to present the results in acceptable oral and written reports. Investigation of a sizeable problem in language or literature, and completion of a formal report. Plan of the project must be approved by the instructor before registration.

FRENCH

(In the Division of Language Arts)

TAFF: Bonhard, Lionetti, Schwartz.

BACHELOR'S DEGREE CURRICULUM

No major in French is offered

General Secondary Teaching Minor

See also pages 140-141 for professional education requirements. A aching major in a second teaching subject is also required for the eneral secondary credential.

Students entering Los Angeles State College from high school with vo years of French are permitted to register in French 100B; those tering with three years, in French 200A; those with four years, in rench 200B. Full year courses in French completed in high school may ot be repeated for graduation credit except the last year taken in high hool.

Lower Division	
French 100 AB—Elementary French	8 units
French 200 AB—Intermediate French	8 units
pper Division	
French 300—Conversation and Composition	3 units
French 301—Advanced Oral and Written Composition	3 units
French 402—French Literature from the Beginnings through the Seventeenth Century	3 units
French 403—French Literature from the Eighteenth Century to the present	3 units
	16–28 units

COURSES OF INSTRUCTION

All upper division courses are conducted in French.

00A Elementary French I (4)

Methodical presentation of basic communication skills of simple, andard French.

00B Elementary French II (4)

Prerequisite: French 100A, or equivalent. Increased proficiency in nderstanding, speaking, reading, and writing French.

50 Basic Patterns in French (3) (General Education)

Beginning course to enable student to carry on practical conversa-ons in ordinary daily activities. Study of patterns of phonology,

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Lower division courses may also be used to fulfill requirements or recommendations of other departments in the college.

structure, and vocabulary as related to the history, culture, and psychology of the people who use the language. Vocabulary building; ea training; pronunciation.

200A Intermediate French I (4)

Prerequisite: French 100B or equivalent. Aims to improve speakin and understanding of French as well as to teach reading for compr hension, and simple writing.

200B Intermediate French II (4)

Prerequisite: French 200A or equivalent. Affords the student great security in French through intensive sessions in speaking, understandin writing and reading the language.

300 Conversation and Composition (3) Offered alternate years

Prerequisite: French 200AB or equivalent. Emphasis on the use c idioms—spoken and written; vocabulary expansion; readings in co temporary French prose.

301 Advanced Oral and Written Composition (3) Offered alternate years

Prerequisite: French 200AB or equivalent. Functional review c grammar as used for communication skills; the writing of current idi matic French; drill in more difficult patterns of speech; explication c texte.

402 French Literature From the Beginnings Through the Seventeenth Century (3) Offered alternate years

Prerequisite: French 200AB or equivalent. Study of the great Frenc epics; lyric poetry of the Middle Ages; representative chronicles; de velopment and growth of the French language; the fable; the essa dramas of the Classical Age.

403 French Literature From the Eighteenth Century to the Present (3) Offered alternate years

Prerequisite: French 200AB or equivalent. French thought of tl Philosophic Age; the Romantic Movement in France; the novel, dran and poetry between 1850 and 1914; the contemporary masterpieces.

499 Independent Study (1-3) Fall, Spring

Prerequisite: Consent of an instructor to act as sponsor; ability t assume responsibility for independent work and to prepare written an oral reports. Project selected in conference with the sponsor befo registration; progress meetings held regularly.

GEOGRAPHY

(In the Division of Social Sciences)

TAFF: Byron (Department Head), Best, Eidt, Newcomb, Nishi, Price.

BACHELOR'S DEGREE CURRICULUM

Geography is a field devoted to the study of regional differentiation. is concerned with identifying, classifying, and interpreting the many arieties of human and physical features on the earth. The major in eography is designed to fulfill the purposes both of a liberal arts eduation and of vocational preparation in geography and closely allied elds.

Major in Geography

ower Division

Geography 150—Human Geography	3 units
Geography 160—Physical Geography	3 units
Geography 260—Elements of Meteorology	3 units
Geography 265—Air Photo and Map Interpretation	3 units
Basic courses in anthropology, economics, or sociology	3 units
Basic courses in botany, geology, or physics	3–5 units

pper Division

Geography 402—Geomorphology and/or Geography 410—Climatology	3–6 units
Geography 405—Cartography	3 units
Select from the following	3–6 units
Geography 441—World Resources (3)	
Geography 475—Geography of Settlement (3)	
Geography 481—Political Geography (3)	
Regional Geography select from the following	9–12 units
Geography 421—Geography of U. S. and Canada (3)	
Geography 423—Geography of Europe (3)	
Geography 424—Geography of Asia (3)	
Geography 425—Geography of Japan (3)	
Geography 426—Geography of the Soviet Union (3)	
Geography 427—Geography of Middle America (3)	
Geography 428—Geography of South America (3)	
Geography 429—Geography of the Pacific Area (3)	
Geography 431—Geography of California (3)	
Geography 460—Field Geography	3 units
Electives in related Natural and Social Sciences (3–5 units of a foreign language are acceptable)	9 units
	51–53 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR GEOGRAPHY MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
**Engl. 150—Written Expr. *or* Lang. Arts 150A	3	**Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Geog. 150, Govt. 150 *or* Psych. 150	6	Geog. 150, Psych. 150 *or* Govt. 150	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Elective †	3–4	Geog. 160—Phys. Geog.	3
		Elective †	3–4

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
Geog. 260—Elem. of Meteor.	3	Geog. 265—Air Photo & Map	3
Hist. 250—U. S. History	3	Phil. 150—Phil. Ideas	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Basic nongeneral educ. course in botany, geology, or physics	3–5
Soc. 150 *or* 201; Anthro. 150; Econ. 150 *or* 201	3	Phys. Educ. elective	1
Phys. Educ. 150	1	Elective † (Personal Health is recommended i the student elects not to take a foreign language.)	3–4
Elective ‡	3–4		

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Geog. 402—Geomorph. *or* Geog. 410—Climatology	3	Geog. 402, 410, 441, 475, 481, *or* any regional course	3
Geog. 441, 475, *or* 481	3	Geog. 405—Cartography	3
Engl. 250—Underst. Lit.	3	Outside elective chosen from upper division courses in related natural and social sciences	3–5
Outside electives chosen from upper division courses in related natural and social sciences	3–5	Art 150—Art, Music, Dance	3
Elective	3	Elective	3
		Geog. 460—Field Geog.*	3

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Regional Geography	3	Regional Geography	6
Outside elective chosen from upper division courses in related natural and social sciences	3–5	H&S 350—Personal Health	2
Gen. Educ. elective	3	Electives	6
Electives	6		

MASTER OF ARTS DEGREE

The graduate program is built on the foundation of undergraduat preparation. The master's degree requires intensive directed study i geography aimed at depth of understanding and intellectual attainment

The master of arts degree in geography is designed to prepare students for teaching at the secondary and junior college levels, for government work of various types, and for advanced training in the field of geography.

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* Geography 460—Field Geography (3) is required of all majors. This course will be offered onl in the summer. It is recommended that geography majors take this course between thei junior and senior years.

† Two years of a foreign language are recommended for the geography major.

‡ If the student elects to take Economics 201 or Sociology 201 in place of the General Educatio courses in those fields he must select a three-unit course from the General Education list o electives. Otherwise the elective is free.

** See "Note" on page 55.

Prerequisite: Completion of the basic requirements for the undergraduate major in geography and passing grade on a preliminary oral examination. A master's program for each student must be worked out in advance with an adviser and approved by the department.

1. Core requirements:
    a. Geography 570—Studies in the Nature of Geography .... 3 units
    b. Select from the following .... 9 units
        Geography 571—Studies in Regional Geography (3)
        Geography 575—Studies in Human Geography (3)
        Geography 580—Studies in Physical Geography (3)
        Geography 599—Thesis (3)
        (The above seminars may be repeated for different areas or topics.)
2. Electives in geography (400 and 500 level courses) .... 9–12 units
3. Electives in related fields outside of geography .... 6– 9 units

30 units

4. Demonstration of reading competency in geographical literature in a foreign language.
5. Written comprehensive examinations if the student does not write a thesis. The student will be given three examinations, each of approximately three hours in length, on the following topics:
    a. General geography.
    b. A systematic branch of geography (physical, economic, political, etc.)
    c. A specific region, continental in scope.

COURSES OF INSTRUCTION

150 Human Geography (3) Fall, Spring (General Education)
(Not open to students who have had a college course in cultural or human geography.) Areal studies of the origins, dispersals, and contemporary distributions of the peoples of the world and their settlement characteristics.

160 Physical Geography (3) Fall, Spring
Study of the natural environment of man; the nature, distribution and relationships of climate, landforms, vegetation, hydrography, and soils.

240 Economic Geography (3) Fall
Areal differentiation of world production, consumption, and trade.

260 Elements of Meteorology (3) Fall
Introduction to dynamic and synoptic relationships of weather elements.

265 Air Photograph and Map Interpretation (3) Fall
Prerequisites: One of the following—Geography 150, 160, 240. Interpretation of natural and cultural landscapes as revealed by maps and aerial photographs.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

400 World Regional Geography (3) Fall, Spring
Study of major physical regions of the world and their occupation and development by man. Designed for the upper division transfer student. No credit will be allowed if the student has taken a lower division course in geography.

402 Geomorphology (3) Fall
Prerequisite: Geography 160 or 400, or physical geology. Identification and interpretation of landforms. Local field trip.

405 Cartography (3) Spring
Prerequisite: One of the following–Geography 150, 160, 240, 265, 400. Maps and techniques of map drafting. Lecture one hour; laboratory four hours.

410 Climatology (3) Fall, Spring
Prerequisite: Geography 260. Major climatic types of the earth; distribution, processes, and problems of classification.

421 Geography of the United States and Canada (3) Fall, Spring
Prerequisite: One of the following–Geography 150, 160, 240, 400. Nature and development of the major regions of the United States and Canada.

423 Geography of Europe (3) Fall, Spring
Prerequisite: One of the following–Geography 150, 160, 240, 400. Interpretation of the natural and cultural features of the countries of Europe and the Mediterranean.

424 Geography of Asia (3) Fall, Spring
Prerequisite: One of the following–Geography 150, 160, 240, 400. Survey of physical economic, cultural, and political geography of China, Japan, Korea, India, Pakistan, and Southeastern Asia.

425 Geography of Japan (3) Spring
Prerequisite: One of the following–Geography 150, 160, 240, 400. Study of Japanese geography with special attention to analysis of population and economic problems, interpretation of complex socio-cultural forms, and investigation of physical components of the land.

426 Geography of the Soviet Union (3) Fall, Spring
Prerequisite: One of the following–Geography 150, 160, 240, 400. Interpretation of natural and cultural features of the Soviet Union.

427 Geography of Middle America (3) Fall
Prerequisite: One of the following–Geography 150, 160, 240, 400. Physical environment and major settlement features in Mexico, Central America, and the islands of the Caribbean.

428 Geography of South America (3) Spring
Prerequisite: One of the following–Geography 150, 160, 240, 400. Physical and cultural environments in the countries of South America.

429 Geography of the Pacific Area (3) Fall
Prerequisite: One of the following–Geography 150, 160, 240, 400. Human and physical features of the islands of the Pacific, Australia, and the Pacific rim. Emphasis on geographic factors influencing contemporary events.

431 Geography of California (3) Fall, Spring
Prerequisite: One of the following–Geography 150, 160, 240, 400. Regional study of California. Emphasis on settlement and utilization of resources.

441 World Resources (3) Spring
Prerequisite: One of the following–Geography 150, 160, 240, 400. Distribution and utilization of major agricultural and mineral resources of the world.

460 Field Geography (3) Summer
Prerequisite: One of the following sequences–Geography 150, 160, and 265; Geography 160, 240, and 265; Geography 265 and 400. Field identification and interpretation of natural and man-made features and the methods used therein.

475 Geography of Settlement (3) Spring
Prerequisite: One of the following–Geography 150, 160, 240, 400. Man's manner of settling new lands and resettling old lands. The form and function of resulting settlements.

481 Political Geography (3) Fall
Prerequisite: One of the following–Geography 150, 160, 240, 400. Areal differentiation of natural and cultural phenomena that affect the world's political organization.

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and consent of instructor.

570 Studies in the Nature of Geography (3)
Seminar in the history, objectives, and methods of geography.

571 Studies in Regional Geography (3)
Seminar on selected regions of the world.

575 Studies in Human Geography (3)
Seminar on selected topics pertaining to the geography of man.

580 Studies in Physical Geography (3)
Seminar on nature, origin, and areal occurrence of the physical qualities of the land (climate, land forms, soils, and vegetation).

599 Graduate Project (3)

GEOLOGY

(In the Division of Science and Mathematics)

STAFF: Richmond (Department Head), Ehlig, Meade

BACHELOR'S DEGREE CURRICULUM

Bachelor of Science Major in Geology

The program leading to the bachelor of science degree in geology is planned to train students for immediate employment in industry or government service, and to prepare students for college or university graduate study. Employment opportunities for geologists exist in the petroleum and mineral industries and in federal, state, and local government.

The degree requires 132 units of which 45 must be in geology courses, 33 in allied physical science courses, and 39 in the general education program. From the remaining electives, courses in professional writing are recommended for all students, and in a foreign language for students who plan a graduate program.

Lower Division

Geology 101—Physical Geology	4 units
Geology 102—Historical Geology	4 units
Geology 201—Mineralogy and Crystallography	4 units
Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry & Calculus I	4 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Physics 201 and Physics 202 *or* Physics 101 and Physics 102	8 units
Engineering 202—Plane Surveying	3 units
Physical Science or Mathematics elective *	4 units

Upper Division

Geology 401—Petrology	4 units
Geology 410—Structural Geology	4 units
Geology 430—Stratigraphy	3 units
Geology 431—Invertebrate Paleontology	4 units
Geology 441—Optical Mineralogy	4 units
Geology 460—Campus Field Geology	3 units
Geology 461—Summer Field Geology	6 units
Geology 497—Senior Problem	2 units
Select *one* course from the following	3 units
Geology 411—Economic Geology (3)	
Geology 432—Micropaleontology (3)	
Geology 442—Petrography (3)	
	78 units

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* One course beyond the beginning year in mathematics, chemistry, or physics.

Geology students who wish to concentrate in paleontology may, wit advisement, substitute as much as 12 units of biological science for 12 units in the geology program, as follows:

4 units of biology for 4 units of optical mineralogy
4 units of biology for 4 units of mathematics
4 units of biology for 4 units of required physical science electives

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR GEOLOGY MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Geol. 101—Physical Geol.	4	Geol. 102—Historical Geol.	4
Chem. 101—Gen. Chem.	5	Chem. 102—Gen. Chem. & Qual. Anal.	5
Math. 100—Basic Math. Anal.	4	Math. 201—Anal. Geom. & Calc. I	4
‡Engl. 150—Written Expr. *or* Lang. Arts 150A	3	‡Sp. 150—Oral Expr. *or* Lang. Arts 150B	3

SOPHOMORE YEAR

Physical Science elective	4	Geol. 201—Mineral. & Crystall.	4
Physics 201 or 101	4	Physics 202 or 102	4
Engr. 202—Plane Survey.	3	Govt. 150—Govt. & Am. Soc.	3
Bio. Sci. 153—Prin. of Bio.	3	Art 150—Art, Music, Dance	3
Phys. Educ. 150	1	Phys. Educ. elective	1

JUNIOR YEAR †

Geol. 401—Petrology	4	Geol. 441—Opt. Mineralogy	4
Geol. 431—Invertebr. Paleon.	4	Geol. 410—Structural Geol.	4
Geol. 460—Campus Field Geol.	3	Psych. 150—Human Behavior	3
Phil. 150—Phil. Ideas	3	Hist. 250—U. S. History	3
H&S 350—Personal Health	2	Elective	3

SENIOR YEAR

Geol. 430—Stratigraphy	3	Geol. Elective *	3
Geol. 497—Senior Problem	2	Gen. Educ. electives	6
Gen. Educ. Soc. Sci. elective	3	Electives	6
Engl. 250—Underst. Lit.	3		
Elective	4		

Bachelor of Arts Major in Geology

A bachelor of arts degree may be a part of the geology curriculum by the fall semester 1960. For information inquire of the Department of Geology or the Division of Science and Mathematics.

COURSES OF INSTRUCTION

101 Physical Geology (4) Fall

Elementary study of the earth, particularly its materials, structure, internal condition, and of the physical and chemical processes at work upon and within it. Lecture three hours; laboratory three hours.

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* Elective chosen from Geol. 442; Geol. 432; Geol. 411.

† Geol. 461—Summer Field Geology, six units (required for graduation; recommended at end of junior year).

‡ See "Note" on page 55.

102 Historical Geology (4) Spring

Evolution of the continents, oceans, mountain systems, and other features of the earth; development of its animal and plant inhabitants. Lecture three hours; laboratory three hours.

201 Mineralogy and Crystallography (4) Spring

Prerequisite: Geology 101 (may be taken concurrently). Study of the nature, characteristics, and structure of the six crystal systems; 75-100 of the common minerals, their occurrence, origin, and associations. Lecture two hours; laboratory six hours.

386 Principles of Geology (3)

Prerequisite: None. Introducation to the principles of geology. Not open to geology majors or to students with credit in lower division geology.

401 Petrology (4) Fall

Prerequisites: Geology 201, 460 (may be taken concurrently). Study of the origin, occurrence and classification of the more common rocks with emphasis on hand lens identification. Lecture two hours; laboratory six hours.

410 Structural Geology (4) Spring

Prerequisite: Geology 401, 460. Structural features of sedimentary, igneous and metamorphic rocks; deformation of the earth's crust; applied practice in laboratory methods dealing with geological problems in three dimensions. Lecture two hours; laboratory six hours.

411 Economic Geology (3)

Prerequisites: Geology 101 or 386. Principles of the geologic occurrence of economic mineral resources. Topics may vary with interest and background of students. Lecture two hours; laboratory three hours.

421 Geology of California (3)

Prerequisites: Geology 101, 102, or 386. Emphasizes geologic history of California with brief treatment of stratigraphy, structure, and economic geology.

430 Stratigraphy (3)

Prerequisite: Geology 102. Characteristics and origin of sedimentary deposits, classification of stratigraphic units, facies, unconformities, and principles of correlation. Lecture two hours; laboratory three hours.

431 Invertebrate Paleontology (4)

Prerequisites: Geology 102. Characteristics and evolution of the important fossil invertebrate animals, and fundamentals of stratigraphical paleontology. Lecture two hours; laboratory six hours.

432 Micropaleontology (3)
Prerequisite: Geology 431. Introduction to the study of foraminifera and their practical application in petroleum geology. Lecture two hours; laboratory three hours.

441 Optical Mineralogy (4) Spring
Prerequisite: Geology 201. Elementary study of optical properties of crystals with emphasis upon the polarizing microscope, and systematic study of important silicate minerals and their determination by optical methods. Lecture two hours; laboratory six hours.

442 Petrography (3)
Prerequisite: Geology 441. Use of petrographic microscope in identifying and classifying rocks and in determining the origin and geologic history of rocks and rock masses. Lecture one hour; laboratory six hours.

460 Campus Field Geology (3) Fall
Prerequisite: Geology 401 (may be taken concurrently). Introduction to geologic field methods and instruments. Preparation of geologic maps and writing of geologic reports. Lecture one hour; laboratory six hours.

461 Summer Field Geology (6) Summer
Prerequisites: Geology 401, 410, 460. Six or seven weeks are required. Summer field work in an area of geologic interest. Geology of the district involving sedimentary formations and structural features will be studied and plotted upon topographic maps and aerial photographs which will be combined into a single finished geologic map. A carefully written report and cross sections will be prepared by such student. Required of geology majors in summer of junior or senior year.

497 Senior Problem (2)
Prerequisites: Geology 401, 410, 460. Progress reports and a final written report based upon individual study of an applied geological problem.

GERMAN

(In the Division of Language Arts)

STAFF: Griessbach

Courses leading to a major or a minor in German are not offered at the present time.

Students entering Los Angeles State College from high school with four years of German are permitted to register in German 200B; those entering with three years, in German 200A; those with two years, enter German 100B; those with one year or less, enter German 100A. Full-year courses in German completed in high school may not be repeated for graduation credit except the last year taken in high school.

COURSES OF INSTRUCTION

100A Elementary German I (4)
Methodical presentation of the basic communication skills.

100B Elementary German II (4)
Prerequisite: German 100A or equivalent. Aims to increase proficiency in understanding, speaking, reading, and writing German.

150 Basic Patterns in German (3) (General Education)
No prerequisites. Beginning course to enable the student to carry on practical conversations in ordinary daily activities. Study of patterns of phonology, structure, and vocabulary as related to the history, culture, and psychology of the people who use the language. Vocabulary building; ear training; pronunciation.

200A Intermediate German I (4)
Prerequisite: German 100B or equivalent. Endeavors to make the student more secure in his use of German. Training in reading and speaking with ease; writing simple German.

200B Intermediate German II (4)
Prerequisite: German 200A or equivalent. Aims to make the student fluent in current German. Training in reading for pleasure; practice in writing ordinary German correctly.

GOVERNMENT

(In the Division of Social Sciences)

STAFF: Black (Department Head), Dvorin, Fishman, Guild, Hopper, Kommers, Misner, Potter, Rusch, Sandler, Warren

BACHELOR'S DEGREE CURRICULA

Major in Government

Four options in the government major, each representing a different objective, are offered.

1. Preprofessional and professional training for entrance into government service as a career, on the federal, state, or local government levels, or for positions on the research or administrative staffs of quasi-public or endowed organizations.
2. Foundational training for entrance into a graduate school of law.
3. Foundational training for careers in the field of international relations.
4. A general program, encompassing such ultimate objectives as teaching in junior colleges, entrance into politics, citizenship participation, liberal arts training, and pregraduate study.

Work-study credit is available to government majors serving as interns in governmental agencies in the Los Angeles area. In many instances these internships must be attained through civil service screening tests conducted by the respective governmental agencies.

Lower Division

Lower division government requirements for all areas of concentration include 6 units of introductory government courses and elementary statistics (Government 201AB, and Sociology 210, or equivalent). Students electing public service (concentration 1), are required to complete elementary accounting; students electing pre-law (concentration 2), are required to complete a year of United States history, or English history, or history of western civilization (preferably one of two former), and elementary accounting; students electing international relations (concentration 3) are required to have 8 units in one foreign language, and are urged to have an additional year's study in that or a second foreign language; students in general government (concentration 4), are required to have either elementary accounting or a year of a foreign language.

Upper Division

	Units
The Government Core (required of all government majors)	
Government 305—American Federal Government	3
Government 413—American Political Thought (International Relations concentration substitute Government 412, Political theory)	3
Government 460—Principles of Public Administration	3
One of the Following:	3
Government 414—Public Opinion and Lobbies (3)	
Government 418—American Political Parties and Politics (3)	
One of the Following:	3
Government 426—International Law (3)	
Government 440—Constitutional Law (3)	
Government 476—Administrative Law (3)	
	15
International Relations Concentration:	
Government 425—U.S. Foreign Policy	3
One of the Following:	3
Government 427—International Relations (3)	
Government 428—International Organization (3)	
Two of the Following:	6
Government 430—European Government (3)	
Government 431—Governments of Latin America (3)	
Government 432—Asiatic Governments (3)	
Two of the Following:	6
Geography 481—Political Geography (3)	
History 478—Diplomatic History of the U.S. (3)	
Economics 406—Principles of International Trade (3)	
	18
Pre-Legal Concentration:	
One of the Following:	3
Government 303—State and Local Government (3)	
Government 304—Municipal Government (3)	
One of the Following:	3
Government 417—Government Controls in the American Economy (3)	
Business 485—Business and Government (3)	
And ALL of the Following:	
Government 442—Anglo-American Legal Systems	3
Economics 310—Economics of the Business Firm	3
History 479—Constitutional History of the U.S.	3
English 406—Communication of Ideas	3
Social Science 450—Scientific Method and Applied Logic	3
	21
Public Service Concentration:	
One of the Following:	3
Government 303—State and Local Government (3)	
Government 304—Municipal Government (3)	
All of the Following:	
Government 463—Public Personnel Administration	3
Government 466—Public Financial Administration	3
English 406—Communication of Ideas	3

	Units
Select Two From the Following Courses:	6
Government 417—Government Cont. in American Economy (3)	
Government 461—Municipal Administration (3)	
Government 465—Principles of Employee Supervision (3)	
Government 468—Public Welfare Administration (3)	
Government 470—Public Relations in Government (3)	
Government 472—Organization and Management (3)	
	18

General Government Concentration:

6 courses in government or related fields chosen with approval of a Government Adviser	18

SUGGESTED FOUR-YEAR COURSE SEQUENCES FOR GOVERNMENT MAJOR

Government Service Concentration

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
†Engl. 150—Written Expr. *or* Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153--Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. & Am. Soc.	3	Hist. 250—U. S. History	3
Art 150—Art, Music, Dance	3	Phil. 150—Phil. Ideas	3
Phys. Educ. 150	1	Phys. Educ. elective	1
Elective	3	Elective	3

SOPHOMORE YEAR

Govt. 201A—Intro. to Pol. Sci.	3	Govt. 201B—Intro. to Pol. Sci.	3
Soc. 210—Elem. Soc. Statis.	3	*Bus. 200A—Prin. of Acctg.	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Gen. Educ. Soc. Sci. elective	3
Econ. 150—Econ. for Citizen	3	Electives	7
Elective	3		

JUNIOR YEAR

Govt. 305—Am. Fed. Govt.	3	Govt. 460—Prin. of Publ. Adm.	3
*Govt. 413—Am. Pol. Thought	3	Govt. 303—St. & Local Govt.	3
Engl. 250—Underst. Lit.	3	H&S 350—Personal Health	2
Govt. 414—Public Opin. *or* Govt. 418—Am. Pol. Parties	3	Engl. 406—Comm. of Ideas	3
Elective	4	Electives	4

SENIOR YEAR

Govt. 417, 461, 465, 468, 470, or 472	3	Govt. 466—Publ. Fin. Adm.	3
Govt. 463—Pub. Pers. Adm.	3	Govt. 417, 461, 465, 468, 470, or 472	3
Math. 353—Math. for Gen. Educ.	3	Gen. Educ. elective	3
Electives	6	Electives	3
		Govt. 476—Adm. Law	3

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* Recommended.

† See "Note" on page 55.

Pre-Legal Concentration

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. & Am. Soc.	3	Hist. 250—U. S. History	3
Art 150—Art, Music, Dance	3	Phys. Educ. elective	1
Phys. Educ. 150	1	Phil. 150—Phil. Ideas	3
Elective	3	Elective	3

SOPHOMORE YEAR

Govt. 201A—Intro. to Pol. Sci.	3	Govt. 201B—Intro. to Pol. Sci.	3
Bus. 200A—Prin. of Acctg.	3	Bus. 200B—Prin. of Acctg.	3
Soc. 210—Elem. Soc. Statis.	3	Amer. or Engl. History	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Gen. Educ. Soc. Sci. elective	3
Amer. or Engl. History	3	Economics 150—Econ. for Citizen	3
		Elective	1

JUNIOR YEAR

Gen. Educ. elective	3	Govt. 460—Prin. of Publ. Adm.	3
Govt. 413 *or* Govt. 412	3	Govt. 303 *or* Govt. 304	3
Engl. 250—Underst. Lit.	3	Hist. 479—Constitu. Hist.	3
†Govt. 414—Publ. Opin. *or* Govt. 418—Am. Pol. Parties	3	H&S 350—Personal Health	2
Elective	3	Engl. 406—Comm. of Ideas	3
		Elective	2

SENIOR YEAR

Govt. 440—Constitu. Law	3	Govt. 417—Govt. Controls *or* Bus. 485	3
Econ. 310—Econ. of Bus. Firm	3	Soc. Sci. 450—Applied Logic	3
Gen. Educ. elective	3	Electives	9
Electives	3		
Govt. 442—Anglo-Am. Legal Sys.	3		

International Relations Concentration

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. & Am. Soc.	3	Hist. 250—U.S. History	3
†Foreign Language	4	†Foreign Language	4
Phys. Educ. 150	1	Phys. Educ. elective	1
Elective	2	Elective	2

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
*Foreign Language	4	*Foreign Language	4
Govt. 201—Intro. to Pol. Sci.	3	Govt. 202B—Intro. to Pol. Sci.	3
Soc. 210—Elem. Soc. Statis.	3	Econ. 150—Econ. for Citizen	3
Art 150—Art, Music, Dance	3	Phil. 150—Phil. Ideas	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci 152	3	Gen. Educ. Soc. Sci. elective	3

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* See "Note" on page 55.

† Recommended.

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Gen. Educ. elective	3	Govt. 418—Am. Pol. Parties	3
Govt. 305—Am. Fed. Govt.	3	Govt. 425—U.S. Foreign Pol.	3
*Govt. 412—Political Theory	3	Geog. 481—Political Geog.	3
Engl. 250—Underst. Lit	3	H&S 350—Personal Health	2
Elective	3	Elective	4

SENIOR YEAR

Govt. 430—European Govt.	3	Govt. 431—Govt. of Latin Am. *or* Govt. 432—Asiatic Govts.	3
Hist. 478—Diplomatic Hist.	3	Govt. 426—Internat. Law	3
Gen. Educ. elective	3	Econ. 406—Internat. Trade	3
Govt. 427—Internat. Relations *or* Govt. 428—Internat. Org.	3	Electives	6
Electives	3		

General Government Concentration

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
**Engl. 150—Written Expr. *or* Lang. Arts 150A	3	**Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio *or* Phys. Sci. 151	3
Art 150—Art, Music, Dance	3	Hist. 250—U. S. History	3
Govt. 150—Govt. & Am. Soc.	3	Phil. 150—Phil. Ideas	3
Phys. Educ. 150	1	Phys. Educ. elective	1
Elective	3	Elective	3

SOPHOMORE YEAR

Govt. 201A—Intro. to Pol. Sci.	3	Govt. 201B—Intro. to Pol. Sci.	3
Soc. 210—Elem. Soc. Statis.	3	Econ. 150—Econ. for Citizen	3
Amer. or English History	3	Amer. or English History	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Gen. Educ. Soc. Sci. elective	3
Electives	4	Electives	4

JUNIOR YEAR

Gen. Educ. elective	3	*Govt. 460—Prin. of Publ. Adm.	3
*Govt. 305—Am. Fed. Govt.	3	*Govt. 426, 440, or 476	3
*Govt. 413—Am. Pol. Thought	3	H&S 350—Personal Health	2
Engl. 250—Underst. Lit.	3	Govt. elective	3
*Govt. 414—Publ. Opin. *or* Govt. 418—Am. Pol. Parties	3	Electives	4

SENIOR YEAR

Govt. electives	6	Gen. Educ. elective	3
Electives	9	Govt. electives	6
		Electives	6

MASTER OF ARTS DEGREE

The master of arts degree program is built upon the foundation of an undergraduate major in government or political science and is designed to provide systematic study in government and related fields at an advanced level for students teaching in this field, students preparing for the doctorate, or for students interested or working in the governmental area who wish to pursue the discipline at an advanced level.

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* Recommended.

** See "Note" on page 55.

Prerequisites: Graduate standing, with an undergraduate major in government or political science. Students with majors in related fields may undertake the M. A. in government upon completion of sufficient work in the field of government, as approved by the Department of Government, to prepare them for graduate courses.

Requirements: A total of 30 units, with work offered in four fields of government, or three government fields and one related field, the program to be prepared by student and adviser with the approval of a departmental committee.

1. Government 510–Seminar in Political Theory .... 3 units
2. Courses selected from at least two of the following fields selected with approval of an adviser .... 6 units
   Public Administration (Government 560, 561, 563, 590)
   Politics and Legislation (Government 518)
   Comparative Government (Government 530)
   International Relations (Government 527)
   Public Law (Government 505YZ)
   American Government (Government 505YZ)
3. One of the following or one additional field from "2" above .... 3 units
   History (500 series)
   Economics (500 series)
   Sociology (500 series)
4. Additional government courses at the 400 or 500 level as approved by an adviser (3 units may be devoted to graduate project) .... 12 units
5. Courses in related fields (must be outside government and may be partially satisfied in "3" above) .... 6 units
6. Comprehensive examination of 3 hours each in four selected fields with a minimum grade of B on each examination. (A thesis in lieu of the examination will be authorized for students who present a project which the department deems worthy of study, but only if the student can indicate in an oral examination his competence in four of the fields indicated in 1, 2, or 3 above.)

MASTER OF SCIENCE DEGREE

The master of science degree in public service with an option in government is offered to provide present and future public service employees with the administrative skills and knowledge necessary for the competent direction of personnel, the administration of financial controls, and the co-ordination of agency functions. It consists of a core program and other graduate work selected to assist the student in meeting his objectives.

1. Prerequisites: Graduate standing with appropriate undergraduate training in government and related fields.
2. General Core:
   Government 460 or 461 .... 3 units
   Government 560 to 561 .... 3 units
   Sociology 411 or 510 .... 3 units
   Government 563 .... 3 units
   Government 590 .... 3 units
3. "500" courses in Government or related fields approved by adviser .... 6 units
4. Additional courses approved by adviser .... 9 units
5. Comprehensive written examination.

6. In addition to course requirements, the student must complete a one-year internship in government, or an approved field project. (This requirement may be waived if the candidate holds, or has held, a position entailing managerial or administrative responsibilities in a public agency.)

COURSES OF INSTRUCTION

Prerequisites: For upper division courses (400 and above) one year of college political science and Government 150 or consent of instructor.

***† 150 Government and American Society** (3) (General Education)
Not open to students who have completed college courses in introductory U.S. Government. The American political system; emphasis on its social setting and the problems of a democratic political system in action.

† 200 California State and Local Government (2)
The functions and structure of California state and local governmental units; current aspect of the governmental process and problems in this State.

*** 201A Introduction to Political Science** (3)
Scope of the field of government. Basic elements of government: origins of the State; constitutions; law and legal systems; legislatures; bureaucracies. Nature of citizenship. Changing roles and responsibilities of government in American life.

201B Introduction to Political Science (3)
Survey of contemporary governmental ideologies and philosophies. Political parties and organizations. Introduction to international relations and international politics.

†303 State and Local Government (3) Fall, Spring
Examination of the nature of state politics; analysis of legislative, judicial and administrative organization; study of local government in metropolitan areas; all with reference to California.

†304 Municipal Government (3) Spring
Contemporary American municipalities and their relationships to other governmental jurisdictions, particularly state governments. Aspects of the California State Constitution with reference to such municipal subjects as home rule, referendum, initiative, recall, metropolitan government.

***305 American Federal Government** (3) Fall, Spring
Policy-making and administrative structures and operations of the Federal Government. Makeup of Congress; the electoral college; committee composition. Executive departments and agencies; regulatory commissions; government corporations.

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* Designates a course which satisfies the United States Constitution requirement.
† Designates a course which satisfies the California state and local government requirement.

98 **Work-Study Assignments and Reports** (1-2) Fall, Spring
Prerequisite: Active, approved employment under the government nternships program. Analysis and reports of the student's performance; egular group meetings.

12 **Political Theory** (3) Fall
European political thinking from Plato to the present with emphasis n modern contributions.

13 **American Political Thought** (3) Spring
American political thinking from the colonial period to the present, vith emphasis on twentieth century contributions.

14 **Public Opinion and Lobbies** (3) Spring
Tactics and aims of pressure groups, particularly lobbies, in the influncing of American public sentiment. Political significance of public pinion polls.

17 **Government Controls in the American Economy** (3) Spring
Government regulation of economic activity. Development of govrnmental controls, programs, and sanctions. Functions of licensing and nspection. Changing concepts of the public welfare.

18 **American Political Parties and Politics** (3) Fall
The rise of American political parties, including third parties; party tructure, operation, control, and political leadership.

25 **United States Foreign Policy** (3) Fall, Spring
Theory and practice of contemporary American foreign policy.

26 **International Law** (3) Fall
Regulation of international relations in peace and in war.

27 **International Relations** (3) Fall, Spring
Theories and practices of international politics today and yesterday.

28 **International Organization** (3) Spring
Organizations, methods, and movements leading to the establishment f international law and order.

30 **European Governments** (3) Fall
The political institutions, ideologies, and problems of the major Euopean countries.

31 **Governments of Latin America** (3) Fall
Political concepts, structures, and trends in the governments of Mexco, Brazil, Argentina, Chile, and others selected for study by the intructor.

32 **Asian Government** (3) Spring
The political institutions and problems of selected Asian nations.

*440 **Constitutional Law** (3) Fall

Basic principles of American constitutional law, and the role of the United States Supreme Court in our political and social development.

442 **The Anglo-American Legal System** (3) Fall

Development of our legal system from Anglo-Saxon and Roman roots to a case system of law and equity based on English and American common law.

460 **Principles of Public Administration** (3) Fall, Spring

The executive function in government; survey of the principles of administrative organization, personnel management, financial administration, administrative law, public relations. Problems and trends in government as a career.

461 **Municipal Administration** (3) Fall, Spring

Prerequisites: Government 460 and 304 are recommended. Analysis of the problems and functions of such units of local government as municipalities, counties, special districts, school districts, and such administrative agencies as housing authorities, police, fire, and public health departments.

463 **Public Personnel Administration** (3) Fall, Spring

Growth of the merit system concept and development of the civil service; recruitment procedures and examinations; position classification; salary structures; retirement plans; in-service training; supervision; employee organizations.

465 **Principles of Employee Supervision** (3) Spring

Prerequisite: Consent of instructor. A series of discussions on government employee situations and problems from the point of view of the lower-level supervisor.

466 **Public Financial Administration** (3) Fall

The role of financial administration and budgeting in determination of governmental policy, in administrative planning and management, in control of government operations, in intergovernmental relations, and in relation to the private economy.

468 **Public Welfare Administration** (3) Spring

Internal administration of government programs such as social security, child care, corrections, pensions. Operation of the grant-in-aid principle. Interagency relationships; problems of field coordination.

470 **Public Relations in Government** (3) Fall

Principles and media used to inform the public of governmental services and programs. Public relations as a staff function. The roles of "information officer," "public service features," public information counters. Agency case histories.

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* Designates a course which satisfies the United States Constitution requirement.

472 Organization and Management (3) Fall
Prerequisites: Government 460 or equivalent. Special study of governmental organization and the techniques and processes of public management. History of the public management movement. Analysis of the problems of control, delegation, and coordination. Methods and procedures of governmental reorganizations.

474 Introduction to City Planning (3) Spring
Functions and administrative structures of city and regional planning agencies. Programs of urban renewal and redevelopment. Economic, legal, aesthetic, and social considerations in program formulation and execution.

475 Comparative Administration (3)
Prerequisites: Government 460 and one of the following: 430, 431, or 432. The evolution, processes and techniques of administrative systems of selected foreign nations compared to American practice. Analysis of systems of colonial administration, international administration, and technical assistance administration.

476 Administrative Law (3) Spring
Process in administrative adjudication, regulation, and rulemaking; duties and liabilities of public officers; appeal procedures; trends in regulation.

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and superior academic performance in government.

05Y-Z Seminar in Contemporary American National Government (3)
Analysis of selected issues and problems of national significance in he United States.

10 Seminar in Political Theory (3)
Prerequisite: Government 412 or 413. Studies of selected topics in political philosophy.

18 Seminar in Political Problems (3)
An analysis of selected aspects of the organization and functioning of American political parties, interest groups, and voting behavior.

27 Advanced Studies in International Relations (3)
Examination of special problems in international politics.

530 Comparative Government (3)
Prerequisites: Six units from Government 430, 431, 432, 427, o equivalent. Special problems, practices, customs, and movements in selected number of nations—both major and minor ones—with emphasi on the use of primary source material in the field.

560 Seminar in Public Administration (3)
Advanced studies in administrative organization—delegation, fiel co-ordination, accountability, and controls. Values, ends, structures an arrangements in large scale governmental management in a democracy Growth of the administrative corps. Trends in administrative research

561 Seminar in State and Local Administration (3) Fall
Prerequisites: Graduate standing and Government 460 or 461. Advanced studies in state and local organizational administration; financia administration; fiscal controls; relationships between states and subdivisions of government, particularly subventions, civil service, retirement systems, taxation, and assesssment. Case studies of problems peculia to California and metropolitan Los Angeles.

563 Advanced Problems in Public Personnel Administration (3)
Case studies of the more complicated personnel problems encountere in governmental agencies, including examination of the varying roles o boards, commissions, and official legislative bodies. New frontiers in personnel research and personnel legislation.

590 Philosophy of Public Service (3) Spring
Prerequisites: Graduate standing, Government 560 or 561, *and* consent of the Head of the Department of Government. Past and presen philosophies of the public service; the vocation of public service; bureaucracy in modern democratic societies; problems of governmenta planning in modern society; social-psychological aspects of publi service; ethical aspects of public service; case studies of decision-making

599 Graduate Project (3)

HEALTH AND SAFETY EDUCATION

(In the Division of Health and Safety, Physical Education, Recreation and Athletics)

STAFF: Elliot (Department Head), Deeds, Ennen, Gmur, Osborn, Raines, Reeves, Warner, Whiteley. *Part-time:* Bobbit, Schroeder.

BACHELOR'S DEGREE CURRICULUM

No major offered.

General Secondary Teaching Minor in Health Education

Designed for students preparing to become secondary school teachers in health and safety subjects. See also pages 139 and 140 for professional education requirements. A teaching major in a different teaching field is also required for the general secondary credential.

Lower Division

Physiology 201 *or* Anatomy 201	3 units
First Aid 201	1 unit

Upper Division

Health and Safety Education 460—School Health Education	3 units
Health and Safety Education 463—Principles of Community Health	2 units
Health and Safety Education 490—Administration of School Health Programs	2 units
Electives selected with the approval of the adviser from the fields of mental health, family life education, nutrition, safety education, and related fields	9 units
	20 units

MASTER OF ARTS DEGREE

Provides preparation for leadership and professional advancement in the Health Science and Safety Education fields.

Prerequisite: Baccalaureate degree with sufficient courses in health, safety, and biological science to provide a foundation for advanced work, or professional experience in the fields of health or safety.

. Required courses: H.&S.Ed. 580—Seminar in Health and Safety Education Research	3 units
. H.&S.Ed. 599—and/or other "500" level courses in health education	9 units
. Additional upper division or graduate courses within the Department of Health and Safety Education or related health fields	3 units
. Courses outside the Division of Health and Safety, Physical Education, Recreation and Athletics	6 units
. Electives	9 units
. The comprehensive examination is required of all candidates who do not take H.&S.Ed. 599.	
	30 units

COURSES OF INSTRUCTION

201 First Aid (1) Fall, Spring
Standard Red Cross first aid.

350 Personal Health (2) (General Education)
Beneficial and detrimental factors of environment and their effect upon the body; ways in which these environmental factors may be utilized for health and safety.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 Methods of Teaching First Aid (2) Fall, Spring
Prerequisite: Current Red Cross certificate in standard first aid. American Red Cross course which qualifies students in Advanced and Instructor First Aid.

460 School Health Education (3) Fall, Spring
Prerequisites: Health education or equivalent. Responsibilities of the classroom teacher in school health education program. Co-operation with medical services, provision of healthful classroom environment, health instruction.

463 Principles of Community Health (2) Fall, Spring
Prerequisite: Health education or equivalent. Historical and modern efforts to meet health needs of the community.

474 Driver Education and Driver Training (2) Fall, Spring
Prepares students to meet the state code requirements for teaching driver education and driver training. Persons enrolled must be qualified operators of motor vehicles in California.

475 Safety Education (2) Fall, Spring
Safety education and accident prevention. Fulfills state requirement in public safety and fire prevention for graduation from state colleges. Includes techniques and materials for instruction.

490 Administration of School Health Programs (2) Fall
Fulfills the state code requirements for a health and development credential and for a teaching minor in health education. Principles and practices of supervision and administration in school health programs. Includes legal provisions relating to school health.

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

560 Administration of Health and Safety Education (2)
Fall, Spring

Prerequisite: Graduate standing. Organization, content, and evaluation of health and safety education programs. Administration and supervision of official and nonofficial agencies.

570 Appraisal and Guidance in Health and Safety Problems (2)
Fall, Spring

Prerequisite: Graduate standing. Designed for teachers, counselors, and health administrators. Techniques of appraisal and guidance. Analysis and interpretations.

580 Seminar in Health and Safety Education Research (3)
Fall, Spring

Prerequisite: Graduate standing. Investigation and analysis of research in health and safety education.

599 Graduate Project (3) Fall, Spring

HISTORY

(In the Division of Social Sciences)

STAFF: Guerrant (Department Head), Bonar, Catren, DeArmond, Draves, Greenwalt, Lindsey, Meyer, Nelson, Pratt, Smith, Tipple.

BACHELOR'S DEGREE CURRICULUM

Major in History

The history major may be undertaken to attain professional, academic, or cultural objectives; such objectives include: an understanding of the past and its contributions to the present, preparation for graduate work and advanced degrees, proficiency in historical method and historical information in preparation for appointment as specialists in business, in government, and in cultural institutions.

Lower Division

History 101AB—Man in Civilization	6 units
History 202AB—American Civilization	6 units

Upper Division

(Courses must be selected in consultation with a history adviser.)

Twenty-four units selected as follows:

From any *one* group of group 1 through 4	6 units
From group 5	6 units
Six units in each of two other groups (1 through 8)	12 units

Group (1) Ancient, Medieval, Far East
  411, 412, 421, 422, 491, 492
Group (2) European
  437, 438, 445, 446
Group (3) Europe: Renaissance to present
  430, 431, 432, 433
Group (4) England and British Empire
  440, 441, 442
Group (5) American: Founding of colonies to present
  471, 472, 473, 474, 475
Group (6) American
  476, 477, 478, 479
Group (7) The American West
  481, 488, 489
Group (8) Latin America
  461, 462, 466

History 497—History Proseminar	3 units
Social Sciences and other related fields (Not more than six units in one field)	9 units
	48 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR HISTORY MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
ngl. 150—Written Expr. *or* ang. Arts 150A	3	†Sp. 150—Written Expr. *or* Lang. Arts 150B	3
ist. 101A—Man in Civil.	3	History 101B—Man in Civil.	3
ovt. 150—Govt. & Am. Soc.	3	Art 150—Art, Music, Dance	3
io. Sci. 153—Prin. of Bio. *or* hys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
hys. Educ. 150	1	Elective	4
lective	3		

SOPHOMORE YEAR

ist. 202A—Am. Civilization	3	History 202B—Am. Civilization	3
io. Sci. 154—Prin. of Bio. *or* hys. Sci. 152	3	H&S 350—Personal Health	2
ngl. 250—Underst. Lit.	3	Phil. 150—Phil. Ideas	3
en. Educ. elective	3	Gen. Educ. elective	3
lective	3	Elective	4

JUNIOR YEAR

istory 471, 472, 473, 474, or 475	3	History 471, 472, 473, 474, or 475	3
istory requirement	6	History requirement	6
sych. 150—Human Behavior	3	Social Science elective	3
Foreign language	3–4	*Foreign language	3–4

SENIOR YEAR

istory requirement	6	History 497—History Proseminar	3
ocial Science elective	3	Social Science elective	3
en. Educ. elective	3	Electives	6–7
lectives	3–4	Hist. 450—Senior Colloquium	3

MASTER OF ARTS DEGREE

The graduate program is built on the foundation of undergraduate reparation. The master's degree requires intensive directed study in istory aimed at depth of understanding.

Prerequisites: 21 approved upper division units in history, including History 497, or equivalent, and 6 units in related fields.

Master's program:

a. History 501	3 units
b. History Seminars ("500" courses)	12 units
c. History electives: Other approved courses in the field of history; may be upper division 400 courses	9 units
d. Approved courses outside field of history	6 units

Recommended—not required.

See "Note" on page 55.

e. Comprehensive examinations:

The comprehensive examinations cover four fields of history of which two *must* be in the New World area including at least one in United States History or the Westward Movement and California History.

Minimum: Any two fields
Maximum: Three fields

New World
(1. United States to 1876
(2. United States from 1850 to present
(3. Westward Movement and Californ
(4. Latin America

Minimum: One field
Maximum: Two fields

Old World
(1. Ancient or Medieval
(2. Modern Europe: 1500-1870
(3. Modern Europe: 1815 to present
(4. British peoples or Far East

f. Demonstration of reading competency in historical literature in a foreign language.

COURSES OF INSTRUCTION

Lower Division

101A Man in Civilization (3)

The story of man from the beginning of historic times to close of th Middle Ages, including earliest civilizations; Hellenic and Roman p riods; economic, political and social developments from the decline the Roman Empire to the Renaissance.

101B Man in Civilization (3)

The story of man from the Renaissance to contemporary times. In cludes commercial and industrial revolutions; social, cultural develop ments; and rise of the national state system.

202A American Civilization (3)

Survey of the development of the United States from the earlie colonial settlements through the Civil War. Outbreak of the Revolution framing of the Constitution; the War of 1812; Jacksonian democrac the sectional conflict between the North and South.

202B American Civilization (3)

Survey of the political, economic, and social transformation of th United States since the close of the Civil War. Includes the Reconstruc tion period; postwar industrial and business expansion; agrarian revol reform movement; the era of the New Deal; America's part in the tw world wars.

250 United States History (3) (General Education)

Prerequisite: Government 150. Selected issues, problems, and ideas focused around selected leaders from Alexander Hamilton and Thom Jefferson to Herbert Hoover and Franklin Roosevelt.

Upper Division

Prerequisite: One year of college history or equivalent.
Exception: No prerequisite for History 476.

11 **The Early Mediterranean World and Greece** (3)
Political and cultural study of the ancient empires in the Mesopota- ian and Egyptian areas, and of classical Greece.

12 **History of Rome** (3)
The development of Rome from earliest times. The rise and fall of e Roman Republic; the Empire to 476 A.D.

21 **The Early Middle Ages** (3)
Europe from the fall of the Roman Empire to the Thirteenth Cen- ry, the political, social, economic, and religious development of medie- al Europe.

22 **The Later Middle Ages** (3)
The emergence of modern Europe and the period's cultural contri- utions to the modern era.

30 **Renaissance to the Enlightenment** (3)
Europe from the end of the medieval period to the Age of Reason in e mid-Eighteenth Century.

31 **Europe: The Eighteenth Century** (3)
Europe from the period prior to the French Revolution until the ongress of Vienna (1815).

32 **Europe: The Nineteenth Century** (3)
Europe from the Congress of Vienna to the outbreak of World Var I.

33 **Europe: The Twentieth Century** (3)
Europe from the beginning of World War I to the present.

37 **Social and Intellectual History of Europe** (3)
The major social and intellectual aspects of the history of modern urope.

38 **Economic History of Europe** (3)
Economic development of modern Europe, with special attention to dustrial revolution. (Same as Economics 472.)

40 **Tudor and Stuart England** (3)
History of England from Henry VII to the year 1714 with emphasis on social, political, and economic developments.

41 **Hanoverian England** (3)
Historical development of England from the early eighteenth century til the present day.

442 The British Empire (3) Fall

Political and economic development of the British Empire since th late eighteenth century with major consideration given to the expansio of the colonial empire and the evolution of the modern empire-common wealth.

445 Russia to 1801 (3)

Study of the development of the Russian state and peoples fror earliest times to the accession of Alexander I.

446 Russia: 1801 to the Present (3)

Russian history in the nineteenth and twentieth centuries.

450 Senior Colloquium in History (3) (General Education)

This course is open only to senior students of demonstrated abilit Each semester a different theme or episode in history is examine thoroughly in the manner of an undergraduate seminar. Individual reac ings, written and oral reports, and discussion. Admission by consent c instructor.

461 Latin America: Colonial Period (3)

Prehistory of the Americas south of the United States. The Europea background, the period of the conquest, and colonial development t the time of the wars of independence.

462 Latin America: National Period (3)

Examination of the struggle for independence and the social, politica and economic development of the Latin America nations to the presen

466 Mexico (3)

Development of the Mexican people and nation since the days c the Aztecs; particular attention to social and cultural matters and t the more recent period.

471 The United States: Colonial Period (3)

History of the 13 colonies from their European origins to the clos of the French and Indian Wars.

472 The United States: Federal Union (3)

Growth of independence in life, thought, and political union fror 1763 through the War of 1812.

473 The United States: Sectionalism, Civil War and Reconstruction (3)

Gradual development of sectionalism, the growing cleavage betwee north and south, the Civil War and the story of reconstruction.

474 The United States: Emergence of the Modern Nation (3)

The rapid economic development of the Nation in the post-Civil Wa period, the acquisition of overseas territory, the rise of Progressivis to the outbreak of World War I.

75 The United States: A World Power (3)
The United States from 1914 to the present.

76 Economic History of the United States (3)
Historical study of American economic development; industrializa- on; national legislation in industry and commerce. (Same as Economics 71.)

77 Social and Intellectual History of the United States (3)
Survey and analysis of the important social and intellectual trends in merica from the early colonial period to the present time.

78 Diplomatic History of the United States (3)
Foreign relations of the United States from colonial backgrounds to e contemporary scene, with special attention to recent diplomatic roblems.

79 Constitutional History of the United States (3)
The Federal Constitution from the historical point of view. Major nsiderations: the Constitutional Convention, and constitutional con- oversies and changes since John Marshall.

81 The Westward Movement and the West (3)
The advance and characteristics of the American frontier from lonial times through the nineteenth century and the development of e West in the past half century.

88 California (3)
Political, economic, social, and intellectual history of California om Spanish times to the present, with emphasis upon current char- teristics, problems, and trends.

89 Los Angeles (3)
Los Angeles from pueblo to metropolis with emphasis on the history Southern California.

91 The Far East to the Twentieth Century (3)
The Far Eastern areas with emphasis on the history of China and the ash of interests as the Occident penetrates the East.

92 The Recent Far East (3)
Survey of the major political, cultural, and international developments the Far East since 1900.

97 History Proseminar (3)
Senior course: Required of all history majors. Introduction to storical method. Prepares the student for graduate seminar work in story; utilizes historical method and bibliography to equip the history ajor for certain specialized positions in business, government, and ltural institutions.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree, superior academic performance in history, and History 497 or equivalent.

501 Historiography and Bibliography (3)

Development of historical writing, with an examination of the works of representative historians and various philosophies of history.

533 Seminar in Europe: Recent (3)

Prerequisite: 6 units of European history or equivalent. Readings, discussions and thesis style research paper.

561 Seminar in Modern Mexico

Prerequisite: History 461 and 462 or equivalent. Readings, discussion and thesis style research paper.

571 Seminar in United States: Early (3)

Prerequisite: 6 units in American history or equivalent. Readings, discussion and thesis style research paper.

575 Seminar in United States: Recent (3)

Prerequisite: 6 units in American history or equivalent. Readings, discussion and thesis style research paper.

577 Seminar in United States: Cultural and Intellectual (3)

Prerequisite: 6 units in American history or equivalent. Readings, discussion and thesis style research paper.

581 Seminar in United States: The West (3)

Prerequisites: History 481 and 488 or equivalent. Readings, discussion and thesis style research paper.

591 Seminar in Far East: Recent (3)

Prerequisite: History 491 and 492 or equivalent. Readings, discussion and thesis style research paper.

599 Graduate Project (3)

HOME ECONOMICS

(In the Division of Technical Sciences)

STAFF: Gregory (Department Head), Brooks, Chamberlain, Graves, Miller, Rhinesperger.

The home economics programs are designed to prepare the individual for a more useful and satisfying personal, family, and community life, as well as for a professional career. The program supplements a broad, cultural general education with practical skills and aesthetic values related to the home and family. For those who wish to teach, there is a program leading to the special or general secondary teaching credential. For those desiring a home economics in business career, a program has been developed in conjunction with business firms and utility companies.

BACHELOR'S DEGREE CURRICULA

Major in Home Economics

Designed for the student who desires intensive preparation for home and family life.

Lower Division

*H.Ec. 101—Fundamental Principles of Clothing Construction	3 units
H.Ec. 102—Textiles, Wardrobe Planning and Construction	4 units
H.Ec. 130—Marriage and Family Relationships	3 units
H.Ec. 210—Food Preparation and Nutrition	4 units
H.Ec. 220—The Child	2 units

Upper Division

H.Ec. 310—Meal Management and Hospitality	4 units
H.Ec. 341—Organizing and Managing the Home	3 units
H.Ec. 360—Color and Design in Home and Furnishings	3 units
H.Ec. 440—Family Finance	3 units
Select from the following	10 units
H.Ec. 400—Tailoring (2) H.Ec. 311—Advanced Foods (3) H.Ec. 349—Home Living (2) H.Ec. 461—Home Furnishing Lab. (3) H.Ec. 320—Child Care Lab. (2) Nursing 101—Home Nursing (2)	
Select from the following	10 units
Art 483—Interior Design (2) Education 410—Educational Psychology (3) English 430—Interpreting Children's Literature (3) Language Arts 464—Contemporary Dramatic Arts (3) Philosophy 304—Ethics (3) Philosophy 338—Comparative Religions (3) Sociology 476—Child Welfare (3)	
	49 units

Students with comparable experience may be excused from H.Ec. 101 by satisfactory achievement on a placement test.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR HOME ECONOMICS MAJOR (B.A. DEGREE)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
*Engl. 150—Writ. Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
† H. Ec. 101—Fundamental Prin. of Clothing Constr.	3	H. Ec. 102—Textiles, Wardrobe	4
H. Ec. 130—Marriage & Fam.	3	Art 150—Art, Music, Dance	3
Elective	2–3	H&S 350—Personal Health	2
Phys. Educ. 150	1	Phys. Educ. elective	1

SOPHOMORE YEAR

Bio. Sci. 154 *or* Phys. Sci. 152	3	Hist. 250—U. S. History	3
Govt. 150—Govt. & Am. Soc.	3	Phil. 150—Phil. Ideas	3
Engl. 250—Underst. Lit.	3	Gen. Educ. Soc. Sci. elective	3
Psych. 150—Human Behavior	3	H. Ec. 210—Food Prep. & Nutr.	4
H. Ec. 220—The Child	2	Elective	3
Elective	2		

JUNIOR YEAR

Gen. Educ. elective	3	H. Ec. 341—Org. & Manage. Hme.	3
H. Ec. 310—Meal Mgmt.	4	H. Ec. electives, page 225	2–4
H. Ec. 360—Color, Design, H.F.	3	Related electives, page 225	4–6
H. Ec. elective, page 225	3	Electives	2–6
H&S 350—Personal Health	2		

SENIOR YEAR

Gen. Educ. elective	3	H. Ec. elective, page 225	2–3
H. Ec. 440—Family Finance	3	Related elective, page 225	2–3
H. Ec. elective, page 225	2–3	Electives	10–12
Related elective, page 225	2–3		
Elective	4		

Special or General Secondary Teaching Major in Home Economics

Designed for the student who wishes to prepare for a career in teaching in the field of home economics.

Lower Division

† H. Ec. 101—Fundamental Principles of Clothing Construction	3 units
H. Ec. 102—Textiles, Wardrobe Planning and Construction	4 units
H. Ec. 130—Marriage and Family Relationships	3 units
H. Ec. 210—Food Preparation and Nutrition	4 units
H. Ec. 220—The Child	2 units
Nursing 101—Home Nursing	2 units

Upper Division

H. Ec. 400—Tailoring	2 units
H. Ec. 440—Family Finance	3 units
H. Ec. 360—Color and Design in Homes and Furnishings	3 units

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* See "Note" on page 55.

† Students with comparable experience may be excused from Home Econ. 101 by satisfactory achievement on a placement test.

H. Ec. 461—Home Furnishing Laboratory	3 units
H. Ec. 310—Meal Management and Hospitality	4 units
H. Ec. 320—Child Care Laboratory	2 units
H. Ec. 341—Organizing and Managing the Home	3 units
H. Ec. 349—Home Living Experience	2 units
	40 units

Recommended electives
- Art 432—Textiles (2)
- Art 447—Weaving (2)
- Art 473—Costume Design (2)
- Art 483—Interior Design (2)
- H. Ec. 430—Household Equipment (3)
- English 430—Interpreting Children's Literature (3)
- Language Arts 464—Contemporary Dramatic Arts (3)
- Philosophy 304—Ethics (3)
- Philosophy 338—Comparative Religions (3)
- Sociology 476—Child Welfare (3)
- Speech 410—Public Speaking (3)
- H. Ec. 470—Demonstration Techniques (3)

SUGGESTED COURSE SEQUENCE FOR HOME ECONOMICS MAJOR WITH SPECIAL SECONDARY CREDENTIAL

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
†Engl. 150—Written Expr. *or* Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
*H.Ec. 101—Fundamental Prin. Cloth. Constr.	3	H.Ec. 102—Textile, Wardrobe	4
H.Ec. 130—Marriage & Fam.	3	Art 150—Art, Music, Dance	3
Elective	3	Elective	2
Phys. Educ. 150	1	Phys. Educ. elective	1

SOPHOMORE YEAR

Bio. Sci. 154 *or* Phys. Sci. 152	3	Hist. 250—U. S. History	3
Govt. 150—Govt. & Am. Soc.	3	Phil. 150—Phil. Ideas	3
Engl. 250—Underst. Lit.	3	Gen. Educ. Soc. Sci. elective	3
Psych. 150—Human Behavior	3	H.Ec. 210—Food Prep. & Nutr.	4
H.Ec. 220—The Child	2	Nursing 101—Home Nursing	2
Elective	2	Elective	1

JUNIOR YEAR

Gen. Educ. elective	3	H.Ec. 341—Org. & Manag. Hme.	3
H.Ec. 310—Meal Mgmt.	4	H.Ec. 440—Family Finance	3
H.Ec. 360—Color, Design, H.F.	3	H.Ec. 461—Home Furnish. Lab.	3
Educ. 300—Intro. to Cre. Prog.	N.Cr.	Educ. 471—Sec. Educ.	5
Educ. 413—Psych. & Soc.	5	H&S 350—Personal Health	2

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* Students with comparable experience may be excused from H. Econ. 101 by satisfactory achievement on a placement test.

† See "Note" on page 55.

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Gen. Educ. elective	3	Educ. 443YZ–Directed Teach.	6
H.Ec. 400–Tailoring	2	Educ. 444YZ–Problems Sec.	3
H.Ec. 320–Child Care Lab.	2	Educ. 480–Counsel & Guid.	2
H.Ec. 349–Home Living	2	Elective	4
Educ. 493–Methods	2		
Educ. 490–Audio Vis.	2		
Elective	2		

SUGGESTED COURSE SEQUENCE FOR HOME ECONOMICS MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR AND SOPHOMORE YEAR SAME AS SPECIAL SECONDARY CREDENTIAL

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Gen. Educ. elective	3	H.Ec. 341–Org. & Manag. Hme.	3
H.Ec. 310–Meal Mgmt.	4	H.Ec. 440–Family Finance	3
H.Ec. 360–Color, Design, H.F.	3	H.Ec. 461–Hme. Furnish. Lab.	3
Educ. 300–Intro. to Cre. Prog.	N.Cr.	Educ. 413–Psych. & Soc.	5
Minor	5	H&S 350–Personal Health	2

SENIOR YEAR

Gen. Educ. elective	3	H.Ec. 349–Home Living	2
H.Ec. 400–Tailoring	2	Educ. 493–Methods (Major)	2
H.Ec. 320–Child Care Lab.	2	Minor	6
Educ. 471–Sec. Educ.	5	Electives	5
Minor	3		

FIFTH YEAR

Educ. 493–Methods (Minor)	2	Educ. 444Z–Problem Sec.	2
Educ. 444Y–Problem Sec.	1	Educ. 442Z–Directed Teach.	3
Educ. 442Y–Directed Teach.	3	Educ. 480–Counsel & Guid.	2
Educ. 490–Audio Vis.	2	Minor	3
Minor	3	Electives	5
Elective	4		

Home Economics in Business Major

Designed for students who desire a career in Home Economics in Business in addition to preparation for family living.

Lower Division

*H. Ec. 101–Fundamental Principles of Clothing Construction	3 units
H. Ec. 102–Textiles, Wardrobe Planning and Construction	4 units
H. Ec. 130–Marriage and Family Relationships	3 units
H. Ec. 210–Food Preparation and Nutrition	4 units
H. Ec. 220–The Child	2 units
Chemistry 100A–Fundamentals of Chemistry	3 units

Upper Division

H. Ec. 310–Meal Management and Hospitality	4 units
H. Ec. 341–Organizing and Managing the Home	3 units
H. Ec. 349–Home Living Experience	2 units
H. Ec. 360–Color and Design in Home and Furnishings	3 units
H. Ec. 430–Household Equipment	3 units
H. Ec. 440–Family Finance	3 units
H. Ec. 470–Demonstration Techniques	3 units
	40 units

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* Students with comparable experience may be excused from H. Econ. 101 by satisfactory achievement on placement test.

Recommended Electives
- Art 103—Art Structure (2)
- Business 341—Salesmanship (3)
- English 406—Communication of Ideas (3)
- Journalism 445—Feature Article Writing (3)
- Business 445—Public Relations Methods (3)
- Business 340—Principles of Advertising (3)
- Education 490—Audio-Visual Instruction (2)
- English 306—Technical Report Writing (3)
- Business 102A—Typing I (2)
- Business 301—Business Correspondence (3)

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR HOME ECONOMICS IN BUSINESS MAJOR

FRESHMAN YEAR

First Semester	*Units*	*Second semester*	*Units*
†Engl. 150—Written Expr. *or* Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153 *or* Phys. Sci. 151	3
*H.Ec. 101—Fundamental Prin. of Cloth. Constr.	3	H.Ec. 102—Textiles, Wardrobe	4
H.Ec. 130—Marriage and Fam.	3	Art 150—Art, Music, Dance	3
Elective	3	Elective	2
Phys. Educ. 150	1	Phys. Educ. elective	1

SOPHOMORE YEAR

Bio. Sci 154 *or* Phys. Sci. 152	3	Hist. 250—U. S. History	3
Govt. 150—Govt. & Am. Soc.	3	Phil. 150—Phil. Ideas	3
Engl. 250—Underst. Lit.	3	Gen. Educ. Soc. Sci. elective	3
Psych. 150—Human Behavior	3	H.Ec. 210—Food Prep. & Nutr.	4
H.Ec. 220—The Child	2	Chem. 100A—Fund. of Chem.	3
Elective	2		

JUNIOR YEAR

Gen. Educ. elective	3	H.Ec. 440—Family Finance	3
H.Ec. 310—Meal Mgmt.	4	H.Ec. 360—Color, Design, H.F.	3
H.Ec. 430—Hsehold. Equip.	3	H.Ec. electives	4–6
H.Ec. 341—Home Mgmt.	3	Electives	3–5
H&S 350—Personal Health	2		

SENIOR YEAR

Gen. Educ. elective	3	H.Ec. 470—Demonstr. Tech.	3
H.Ec. 349—Home Living	2	H.Ec. recommended electives	2–5
H.Ec. recommended electives	2–4	Electives	7–10
Electives	6–8		

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* Students with comparable experience may be excused from H. Ec. 101 by satisfactory achievement on a placement test.

† See "Note" on page 55.

General Secondary Teaching Minor

Lower Division

*Home Economics 101—Fundamental Principles of Clothing Construction	3 units
Home Economics 102—Textile, Wardrobe Planning and Construction	4 units
Home Economics 130—Marriage and Family Relationships	3 units
Home Economics 210—Food Preparation and Nutrition	4 units
Home Economics 220—The Child	2 units

Upper Division

Home Economics 310—Meal Management and Hospitality	4 units
Home Economics 341—Organizing and Managing the Home	3 units
Home Economics 360—Color and Design in Home and Furnishings	3 units
	26 units

COURSES OF INSTRUCTION

***101 Fundamental Principles of Clothing Construction** (3) Fall, Spring

Basic principles and techniques of garment construction; suitable dress; use and care of tools, materials and equipment. Two 3-hour laboratories combined with lecture.

102 Textiles, Wardrobe Planning, and Construction (4) Fall, Spring

Prerequisite: Home Economics 101, or pretest. Principles and skills in garment construction. Selection, construction, care and repair of personal and family wardrobe. Consideration of economic, psychological and time factors; related textile study. One hour lecture; two 3-hour laboratories combined with lecture.

130 Marriage and Family Relationships (3) Fall, Spring

Interpersonal relationships of family members and the resulting effects on the individual, family group, and the community. Problems involved in courtship, marriage, and establishing the home.

210 Food Preparation and Nutrition (4) Fall, Spring

Nutrition fundamentals, manipulative techniques and scientific principles as bases for meal planning and preparation. One hour lecture; two 3-hour laboratories combined with lecture.

220 The Child (2) Fall, Spring

Care and guidance of the child from infancy to preadolescence.

310 Meal Management and Hospitality (4) Fall, Spring

Prerequisite: H.Ec. 210. Meal planning preparation with emphasis on nutrition, economics, aesthetics, and hospitality. One hour lecture; two 3-hour laboratories.

311 Advanced Food Preparation (2)

Prerequisite: H.Ec. 210. Recipe evaluation, advanced work in food preparation; history and cookery of foreign foods. Two 2-hour laboratories combined with lecture.

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* Students with comparable experience may be excused from H.Ec. 101 by satisfactory achievement on a placement test.

320 Child Care Laboratory (2) Fall, Spring
Prerequisite: H.Ec. 220. Observation and participation in nursery schools or child care centers, including evaluation and parent contact. One hour lecture; three-hour laboratory.

341 Organizing and Managing the Home (3) Fall, Spring
Principles of effective home management; efficient use of time, energy, money, and materials.

349 Home Living Experience (2) Fall, Spring
Prerequisites: H.Ec. 310, 341, 440. Group living experiences under supervision in home management house. Practical application of basic principles of homemaking. Six weeks residence. Fee to cover living cost.

360 Color and Design in Home and Furnishings (3) Fall, Spring
Application of color and design principles in the home; selection of furniture, textiles, and accessories related to family needs, income, and interest.

398 Work-Study Assignments and Reports (1-2)
Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

400 Tailoring (2) Fall, Spring
Prerequisite: H.Ec. 102. Principles, processes and skills used in the construction of suits and coats. Two 2-hour laboratories combined with lecture.

401 Dress Design (3)
Fundamentals of pattern drafting, dress design, and draping. Two 3-hour laboratories combined with lecture.

405 Textile Study (2)
Recognition and analysis of fibers, fabrics and finishes. Consideration of factors which determine durability, use, care, and price of fabrics used in the home. Two 2-hour laboratories combined with lecture.

410 Experimental Cookery (3)
Prerequisites: H.Ec. 210, 310. Application of scientific principles to experimental methods in food preparation and recipe analysis. Two 3-hour laboratories.

430 Household Equipment (3) Fall
Fundamental considerations governing selection, operation, and care of equipment used in the home. Two 3-hour laboratories combined with lecture.

440 Family Finance (3) Fall, Spring
Economic role of the family; expenditures, savings and investments; evaluation of marketed goods and services; sources of consumer aids and protections.

460 Housing (3)
Study of functional design in dwellings suited to stages of family life cycle; trends, developments and research in housing.

461 Home Furnishing Laboratory (3) Fall, Spring
Selection, use, and care of materials and tools needed for construction or finishing items for the home; principles of construction of draperies and slipcovers; wood finishing and upholstery techniques. Two 3-hour laboratories combined with lecture.

470 Demonstration Techniques (3) Spring
Practice in techniques involved in promotional and educational demonstrations. Field experience through co-operation with local business and utility companies. Two 3-hour laboratories combined with lecture.

499 Special Problems in Home Economics (1-3) Fall, Spring
Approval of the staff is required. Independent study of home economics problems designed to meet the individual needs and interests of the major student with upper division standing.

INDUSTRIAL ARTS

(In the Division of Technical Sciences)

STAFF: Dobson (Department Head), Ehrenborg, Gummere, Haithwaite, Hoffman, La Monica, Mays, Sweetnam, Teague, Thomas, Zahrt, Nihardt (Prof. Emeritus). *Part-time:* Baer, Goldsmith, Johnson, Knudson, Roberts, Todd, Thomson, and Wilbert.

BACHELOR'S DEGREE CURRICULA

Major in Industrial Arts

Students desiring to receive the A.B. degree with a major in industrial arts must plan this major with the advice and counsel of a department adviser.

Special Secondary Limited Credential in Industrial Arts Education

Students should consult the Industrial Arts Department head for requirements for the Special Secondary Limited Credential in Industrial Arts Education.

Special Secondary Teaching Major in Industrial Arts

See also pages 140-142 for professional education requirements.

Designed to prepare teachers for elementary and secondary school positions.

Ordinarily industrial arts is offered as a teaching major. Unless authorized by the department, the student must qualify for a special secondary credential in industrial arts as a part of major department requirement.

The following sequence of courses is listed as a guideline to students wishing to secure this credential.

Lower Division (18 units required)

IA 100—Basic Automotive Mechanics	3 units
IA 110—Basic Drafting	3 units
IA 120—Basic Electronics	3 units
IA 130—Basic Graphic Arts	3 units
IA 160—Basic Metalwork	3 units
IA 170—Basic Woodwork	3 units

Upper Division (28 units required)

IA 300—Industrial Arts Curriculum	3 units
Select two of the following areas of concentration based on required basic courses	18 units

IA 401ABC—Automotive Mechanics (3-3-3)
IA 411ABC—Drafting (3-3-3)
IA 421ABC—Electronics (3-3-3)
IA 431ABC—Graphic Arts (3-3-3)
IA 441ABC—Industrial Crafts (Handicrafts) (3-3-3)

IA 461ABC—Metalwork (3-3-3)
IA 471ABC—Woodwork (3-3-3)
IA 491—Photography (3)
IA 492—Photography (3)
IA 493—Photography (3)

Four units from the following courses selected with the consent of an adviser .... 4 units

IA 390—Basic Photography (3)
IA 480—Comprehensive General Shop (3)
IA 481—Shop Maintenance (1)
IA 482—Shop Drawing (2)
IA 483—Construction of Teaching Aids (3)
IA 484—Industrial Arts Design (2)

Economics 302—Labor Economics .... 3 units

46 units

General Secondary Teaching Major

The industrial arts requirements for the general secondary credential in industrial arts are the same as those for the special secondary credential. See also pages 140-141 for professional education requirements. A teaching minor in a different teaching field and a graduate year including additional professional education courses are required for the general secondary credential.

SUGGESTED COURSE SEQUENCE FOR INDUSTRIAL ARTS MAJOR WITH SPECIAL SECONDARY CREDENTIAL

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
I. A. 110—Basic Draft. I	3	I. A. 170—Basic Woodwrk. I	3
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. & Am. Soc.	3	Art 150—Art, Music, Dance	3
Phys. Educ. 150	1	Phys. Educ. elective	1
Elective	3	Elective	3

SOPHOMORE YEAR

I. A. 160—Metalwrk. I	3	I. A. 120—Basic Electricity-Electronics	3
I. A. 101—Basic Automotive Mech.	3	I. A. 130—Basic Graphic Arts	3
Phil. 150—Phil. Ideas	3	Engl. 250—Underst. Lit.	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Hist. 250—U. S. History	3
Psych. 150—Human Behavior	3	Gen. Educ. Soc. Sci. elective	3

JUNIOR YEAR

First Ind. Arts. Concentration	3	First Ind. Arts. concentration	3
H&S 350—Personal Health	2	Second Ind. Arts. concentration	3
Gen. Educ. elective	3	Educ. 471—Sec. Educ.	5
Educ. 300—Intro. Cred. Prog	N.Cr.	I. A. 300—Ind. Arts. Curric.	3
Econ. 302—Labor Econ.	3	Electives	2
Educ. 413—Psych. & Soc.	5		

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* See "Note" on page 55.

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
First Ind. Arts concentration	3	Second Ind. Arts concentration	3
Second Ind. Arts concentration	3	Gen. Educ. elective	3
Educ. 490—Audio-Vis.	2	Educ. 443YZ—Directed Teach.	6
Educ. 493IA—Methods	2	Educ. 444YZ—Problems Sec.	3
Electives	5		

SUGGESTED COURSE SEQUENCE FOR INDUSTRIAL ARTS MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR AND SOPHOMORE YEAR SAME AS SPECIAL SECONDARY CREDENTIAL

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
First Ind. Arts concentration	3	First Ind. Arts concentration	3
H&S 350—Personal Health	2	Second Ind. Arts concentration	3
Gen. Educ. elective	3	Educ. 413—Psych. and Soc.	5
Educ. 300—Intro. Cred. Prog.	N.Cr.	Ind. Arts. 300—Ind. Arts. Curric.	3
Minor	5	Minor	2
Econ. 313—Labor Econ.	3		

SENIOR YEAR

First Ind. Arts concentration	3	Second Ind. Arts concentration	3
Second Ind. Arts concentration	3	Gen. Educ. elective	3
Educ. 471—Sec. Educ.	5	Educ. 493IA—Methods (Major) (Minor)	4
Minor	4	Minor	5

FIFTH YEAR

Minor	5	Educ. 442Z—Directed Teach.	3
Educ. 442Y—Directed Teach.	3	Educ. 444Z—Problems Sec.	2
Educ. 444Y—Problems Sec.	1	Educ. 480—Counsel. & Guid.	2
Educ. 490—Audio-Vis.	2	Electives	8
Elective	2		

General Secondary Teaching Minor

IA 300—Industrial Arts Curriculum	3 units
One Area of Concentration	12 units
Other Industrial Arts courses to be selected with the approval of the department head	7 units
	22 units

MASTER OF ARTS DEGREE

Industrial Arts majors who wish to take a master's degree in Industrial Arts Education should contact the Department for the degree requirements.

COURSES OF INSTRUCTION

100 Basic Automotive Mechanics I (3)
Beginning course in auto mechanics including service, installation and repair of electrical, mechanical, and hydraulic units of the automobile.

110 Basic Drafting I (3)
Drafting fundamentals including orthographic projection, geometric construction, and pictorial representation of working drawings and building plans.

120 Basic Electronics I (3)
Fundamentals of electricity and electronics applied to testing, construction, and repair of electrical and electronic projects. Calculations, circuits, and electrical measurements are stressed.

130 Basic Graphic Arts I (3)
Basic overview of the graphic arts industry including hand composition, letter press and offset printing, silk screen printing, bookbinding, rubber stamp making, block printing and photography.

160 Basic Metalwork I (3)
Basic tool processes in sheet metal, art metal, bench metal, casting and forging, and machine shop practice. Includes use of hand and power tools and machines.

170 Basic Woodwork I (3)
Basic processes in woodworking. Includes care and correct use of common woodworking tools and power machines.

300 Industrial Arts Curriculum (3)
Philosophy and development of industrial arts education; its present place and function in the total program of elementary and secondary education. Development and use of instructional materials for different industrial arts areas; preparation and use of tests, instruction sheets, courses of instruction, and shop planning. This course is a prerequisite to Education 493IA.

340 Industrial Arts in the Elementary School (2)
Development of skills with hand tools used in construction. Experience in making materials used in dramatic play to enrich the social studies. (Same as Art 340.)

390 Basic Photography (3)
Principles of photography. Camera and darkroom techniques; black and white photography; some color photography.

398 Work-Study Assignments and Reports (1-2)
Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401A-B-C Automotive Mechanics II, III, IV (3-3-3)
Prerequisite: Industrial Arts 100. Sequence of three courses primarily designed to prepare students as industrial arts auto mechanic teachers. Service, repair, and installation of the engine, chassis, electrical systems, body and fenders, and accessories of the automobile.

411A-B-C Drafting II, III, IV (3-3-3)
Prerequisite: Industrial Arts 110. Sequence of three courses designed to prepare students as industrial arts drafting teachers. Shape and size description; use of drafting instruments; lettering; sketching, fasteners; cams and gears; sheetmetal, architectural, aircraft, electrical, piping, welding, and structural drafting; tool design; reproduction processes.

421A-B-C Electronics II, III, IV (3-3-3)
Prerequisite: Industrial Arts 120. Sequence of three courses primarily designed to prepare students of electricity-electronics teachers for industrial arts programs. Electricity, radio, sound, television, electronics, communications; radio and electronic construction and repair; use of test equipment; safety.

431A-B-C Graphic Arts II, III, IV (3-3-3)
Prerequisite: Industrial Arts 130. Sequence of three courses primarily designed to prepare students for teaching graphic arts in industrial arts programs. Design and layout, composition, presswork, binding, photography, silk screen work, block printing, rubber plates, gold stamping, offset lithography, and other duplicating processes.

432A Typographic Layout and Design I (3)
Prerequisite: Course in typography or consent of instructor. Basic principles of design applied to products of the printer. Drawing thumbnail sketches and rough and finished layouts in solution of copy-fitting problems, selection of type and paper, and selection of various processes for reproduction of finished project. (Formerly Business 377.)

432B Typographic Layout and Design II (3)
Prerequisite: Industrial Arts 432A. Continuation of 432A with stress upon the layout and design of complete projects. Use of working dummies to illustrate the problems of printing production. Basic elements of book design. (Formerly Business 378.)

433 Printing Estimation (3)
Prerequisite: Industrial Arts 130 and 431A-B-C or consent of instructor. Elements of estimating all classes of printing involving type composition, presswork, binding, paper, photoengravings; cost-finding problems. (Formerly Business 379.)

441A-B Industrial Crafts (Handicrafts) II, III, IV (3-3-3)
Prerequisite: Permission of the instructor. Advanced course in handicrafts. Industrial operations and processes used in novelty wood, metal, plastics, leather, jewelry, lapidary, sportscraft, and related instructional areas.

461A-B-C Metalwork II, III, IV (3-3-3)
Prerequisite: Industrial Arts 160. Sequence of three courses primarily designed to prepare students as general metalworking teachers. Design and construction of projects in following areas: Art metal, bench metal, sheet metal, forging and heat treating, machine shop, patternmaking and foundry, and welding. Instruction in proper use and care of hand tools, power tools, machines, materials, safety, shop organization and shop management.

471A-B-C Woodwork II, III, IV (3-3-3)
Prerequisite: Industrial Arts 170. Sequence of three courses primarily designed to prepare students as general woodworking teachers. Planning; hand and power tools; woodworking machines; model making; pattern making; carpentry; cabinet and furniture making; finishing.

480 Comprehensive General Shop (3)
Prerequisite: Completion of required basic courses for Industrial Arts major. Teaching methods and procedures used in comprehensive general shop program in the secondary schools. Design and construction of projects involving a combination of several industrial arts areas. Shop organization and management procedures.

481 Shop Maintenance (1)
Study of various maintenance problems found in industrial arts shops in public schools.

482 Shop Drawing (2)
Prerequisite: Industrial Arts 110. Additional information and practice in the preparation of working drawings for all of the industrial arts areas. Credit cannot be given for Industrial Arts 411A-B-C and 482.

483 Construction of Teaching Aids (3)
Construction of teaching aids for shop class use, such as cutaway models and mockups, assignment boards, checking devices for course coverage, blownup models, electrical identification panels, procedure boards, and material specimens.

484 Industrial Arts Design (2)
Two- and three-dimensional studies in color, texture, shape, form, and space as they relate to the materials and processes of industrial arts; appreciation of design in industrial arts; lecture, laboratory and field trips.

491 Color Photography (3)
Prerequisite: Industrial Arts 390 or the equivalent. Principles of color photography. Exposure and processing techniques as applied to current films. Survey of color print processes.

492 Functional Photography (3)
Prerequisites: Industrial Arts 390 or the equivalent. Principles and practices of photography in education, industry, business and research with emphasis on high-speed, timelapse, invisible light and polarized light photography; data recording and copying; photomicroscopy, macrophotography, and astrophotography; and template making.

493 Advanced Photography (3)
Prerequisites: Industrial Arts 390 or the equivalent. Recommended prerequisites: Industrial Arts 491 and 492. Advanced photographic techniques for the photography teacher; studio, pictorial and press photography; photomechanical reproduction; advanced processing; techniques, organization and problems in teaching photography.

499 Special Problems in Industrial Arts (3)
Approval of the department head. Independent study of industrial arts problems designed to provide upper division students an opportunity for additional experience of an advanced nature in an area of special interest.

GRADUATE COURSES

505 Supervision and Organization of Industrial Arts Programs (3)
Responsibilities of the supervisor for organizing industrial arts programs on various levels and for the improvement of instruction in the field.

506 Teaching Problems in Industrial Arts (3)
Study and investigation of teaching problems in industrial arts. Provision for individual and group studies of special problems.

583 Development, Use, and Evaluation of Instructional Aids in Industrial Arts (3)
Advanced course in development, use, and evaluation of instructional aids. Emphasis on three-dimensional teaching aids, charts, slides, and displays.

584 Seminar in Advanced Industrial Arts Design (3)
Design as applied to projects of metal, plastics, wood, leather, and other materials. Students must show graduate competence in design and research.

JOURNALISM

(In the Division of Language Arts)

STAFF: Borders (Adviser), Haithwaite, R. Hoffman, Hungerford, P. Scott. *Part-time:* Atwood, Harrington, Owen.

BACHELOR'S DEGREE CURRICULUM

Major in Journalism

Students who complete the professional major will find careers in: (1) the editorial and advertising departments of newspapers, magazines, and industrial organs, (2) public relations with business firms, government, colleges, and city school systems, (3) the editorial and business staffs of radio and television news bureaus, (4) the fields of teaching journalism and taking charge of publications in schools and colleges.

Lower Division

Journalism 100—Modern Journalism and Mass Media of Communication	3 units
Journalism 101—News Writing	3 units
Journalism 102—Reporting	3 units

Upper Division

Journalism 338—Typography and Mechanics of Newspapers	2 units
At least *one* from the following	3 units
*Journalism 430YZ—News Editing (3-3)	
At least *one* course from the following	3 units
*Journalism 440—History and Philosophy of the Mass Media (3)	
Government 303—State and Local Government (3)	
Government 304—Municipal Government (3)	
Government 414—Public Opinion and Lobbies (3)	
Government 470—Public Relations in Government (3)	
At least *one* course from the following	3 units
*Journalism 441—Magazine and Newspaper Analysis (3)	
Business 304—Principles of Marketing (3)	
Economics 390—Current Economic Problems (3)	
Economics 412—Development of Economic Thought (3)	
At least *one* course from the following	3 units
*Journalism 470—Newspaper Management (3)	
Journalism 471—Newspaper Advertising (3)	
Business 340—Principles of Advertising (3)	
Business 440—Advanced Advertising (3)	
Business 445—Public Relations Methods for Business (3)	
Home Economics 130—Marriage and Family Relationships (3)	
Home Economics 440—Family Finance (3)	
At least *one* course from the following	2 units
*Journalism 391-393-395—Special Projects in Journalism (2)	
Journalism 398—Work-Study Assignments and Reports (2)	
Journalism 490—Press and World Affairs	2 units
Journalism 491—Law of the Mass Media of Communication	2 units
American Studies 402—Ideas in America	3 units
	32 units

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* Normally these courses are recommended for the major unless similar courses from other colleges have been completed in lower division.

Teaching Major in Journalism

No teaching major is offered in the field of journalism exclusively. A student who is interested in a composite-field teaching major which includes journalism should refer to pages 245-246, where the language arts major is outlined.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR JOURNALISM MAJOR

First semester	*Units*	*Second semester*	*Units*
FRESHMAN YEAR			
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Engl. 250—Underst. Lit.	3	Phil. 150—Phil. Ideas	3
Govt. 150—Govt. & Am. Soc.	3	Art 150—Art, Music, Dance	3
Psych. 150—Human Behavior	3	Journalism 100—Modern Journ. & Mass Media of Comm.	3
Phys. Educ. 150	1	Physical Educ. elective	1
SOPHOMORE YEAR			
Phil. 350—Logic	3	H&S 350—Personal Health	2
Geog. 150—Human Geog.	3	Hist. 250—U. S. History	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Nat. S. 355—Nature Study	3
Jour. 101—News Writ. *or* Jour. 391W—Sp. Projects	2	Jour. 102—Reporting *or* Jour. 391X—Sp. Projects	2
Elective	4	Elective	5
JUNIOR YEAR			
Bus. 340—Princ. of Adv.	3	Engl. 440—Crit. Appr. to Lit.	3
Govt. 303—St. & Local Govt.	3	Govt. 304—Municp. Govt.	3
Jour. 430Y—News Editing	3	Jour. 338—Typography	2
Jour. 440—Hist. & Phil. of Mass Media	3	Jour. 339—Photo Jour.	3
Jour. 391, 393, 394, or 395	1-2	Jour. 430Z—News Editing	3
Elective	2-3	Jour. 391, 393, 394, or 395	1-2
SENIOR YEAR			
Am. Studies 402—Ideas in Am.	3	Bus. 445—Pub. Rel. Methods	3
Engl. 481—Lit. & Fine Arts, A.D.	3	Hist. 450—Senior Colloquium	3
Jour. 470—Newsp. Mgmt.	3	Jour. 490—Press & Wld. Affairs	2
Jour. 491—Law of Mass Media	2	Jour. 445—Feature Art. Writ.	3
Jour. 391—Work-Study	1-2	Jour. 398—Work-Study	1-2
Elective	3	Elective	3-5

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*See "Note" on page 55.

MASTER OF ARTS DEGREE

See "Language Arts," page 245.

COURSES OF INSTRUCTION

Ability to type or concurrent enrollment in typing is a prerequisite for all students majoring in journalism.

100 Modern Journalism and Mass Media of Communication (3)
Survey of mass media of communication with special emphasis on newspapers, magazines, radio, and television. Study of news functions, opinion-forming and interpretive materials, and feature values.

101 News Writing (3)
Introduction to news writing and reporting. News sources, collection of news, acceptable forms for news stories, and newspaper style.

102 Reporting (3)
Continuation of Journalism 101. Specialized reporting, feature writing, and staff work on the newspaper. Provides base for advanced journalism courses.

338 Typography and Mechanics of Newspapers (2) Spring
Study of techniques of publishing, including typography, typesetting, photoengraving, printing methods and machines. Background for understanding and supervising printing problems.

339 Photo-Journalism (3) Spring
Techniques and practice of producing a photographic essay. Basic photography recommended but not required. Lecture two hours; laboratory two hours.

391-395 Special Projects in Journalism
391WXYZ *College Times* (2)
393WXYZ *Pitchfork* (1)
394WXYZ *Night Times* (1)
395WXYZ *News Bureau* (2)

Prerequisite: Consent of instructor. Recommended for members of *College Times* staff, *Pitchfork* staff, *Night Times* staff, and *News Bureau* staff. One hour class plus three hours additional supervised activity weekly. May be taken in any combination and may be repeated for a total of eight units.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

430Y-Z News Editing (3-3) Y–Fall; Z–Spring
Prerequisites: Two semesters of collecting and writing news or equivalent. Techniques of copyreading and headline writing, theories of news selection and makeup, examination of newspaper editorial practice.

40 History and Philosophy of the Mass Media (3) Fall
Study of development of journalism, particularly in the United States, vith an introduction to important papers and personalities. Developnent of freedom of the press with consideration of its responsibilities nder law.

41 Newspaper and Magazine Analysis (3) Fall
Examination of editorial policies of representative daily, weekly, and nonthly publications. Critical study of news and feature coverage. Inluence of the media on public opinion and popular taste. Bases for udgment of reliability, responsibility, bias.

45 Feature Article Writing (3) Spring
Open to all upper division students and to sophomores who have ompleted two semesters of collecting and writing of news, and one emester of copyreading and headline writing, or their equivalents. Deals rincipally with writing of articles for Sunday feature sections of newsapers or trade or regional magazines.

60 Industrial Magazine Publishing (3) Fall
Editing and business management of the house organ and industrial nagazine, stressing format, copy, illustration, and promotion. For the eginner or, as a refresher course, for the working editor.

64 High School Journalism (2) Spring
Theory and technique of advising school newspaper and yearbook taffs. Relation of staff assignments to classroom instruction. Designed or credential candidates in education, English, and language arts who nay supervise school publications. Practice in rating the quality of econdary yearbooks and newspapers.

70 Newspaper Management (3) Fall
Analysis of the economy, organization, and business operation of daily nd weekly newspapers. Circulation, advertising, promotion, production, nd plant design problems. Practice in simple cost accounting and bookeeping procedures in newspaper business management.

71 Newspaper Advertising (3) Spring
Principles of advertising with emphasis on the newspaper as an adversing medium. Instruction and practice in preparing pictures, layouts, nd copy for newspaper use, including attention to mat services and vailable syndicated materials.

90 The Press and World Affairs (2) Spring
Comparative world journalism with an examination of sources of news om various capitals. Analysis of propaganda. Comparative study of e four streams of news: local, state, national, and international.

491 Law of the Mass Media of Communication (2) Fall
Chiefly a study of the law of libel. Consideration of the right of privacy, contempt of court, freedom of the press, copyright, statutory limitations, postal regulations and the right to print news of public affairs. Privileged matter under law.

492 Radio and Television Continuity Writing (3) Fall
Analysis and preparation of local news and commercials, musical introductions, and special news features for radio and television.

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

520 Seminar in Journalism (3)
Combines intensive training in advanced journalistic writing at the graduate level and study of outstanding contemporary publications and the contemporary publication field. Analysis of leading contemporary works.

LANGUAGE ARTS

(In the Division of Language Arts)

STAFF: Faculty from co-operating disciplines within the Language Arts Division.

BACHELOR'S DEGREE CURRICULUM

Major in Language Arts

The language arts program is designed to prepare secondary school teachers who have a special interest in communication skills. Students n this program take a common core of upper division courses emphasizng an awareness and understanding of language and thought patterns in reading, writing, speaking, and listening. Requirements in language, speech, and mass media analysis courses are supplemented by electives n literature.

Language arts is offered as a teaching major. Students wishing to qualify for a bachelor's degree in this field should follow the requirenents listed below for the general secondary teaching major.

General Secondary Teaching Major

See also pages 140-141 for professional education requirements. A eaching minor in a different teaching field is also required for the general secondary credential. (Language arts majors may not elect an English or speech minor since the program is a composite one including ignificant elements from both English and speech major programs. Language arts majors are encouraged to supplement this major with a ninor in social sciences.) The student undertaking the language arts najor should ask for an adviser at the office of the Division of Language Arts before taking courses in the major.

Lower Division

No requirements beyond General Education courses: Language Arts 50AB * and English 250.

Upper Division

English 405—Linguistic Science and Modern English Grammar	3 units
English 406—Communication of Ideas	3 units
Journalism 441—Newspaper and Magazine Analysis	3 units
Language Arts 464—Contemporary Dramatic Arts	3 units
Speech 465—High School Speech Arts	2 units
Speech 468—Speech Analysis and Evaluation	3 units
Select *two* courses from the following	6 units
Speech 400—Group Discussion (3)	
Speech 411—Persuasive Speaking (3)	
Speech 420—Oral Interpretation (3)	
American Studies 402—Ideas in America	3 units
English 484—Contemporary World Literature	3 units

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*See note under "IV. Communication," p. 55.

Select six units from either of the following options .... 6 unit
  Option 1—American Literature
    a. Three units from English 470, English 473, English 474
    b. Three units from English 471, English 472, English 475
  Option 2—British Literature
    a. Three units from English 466, English 467, English 468
    b. English 469
Select *one* course from the following .... 2–3 unit
  English 417—Interpreting Shakespeare (3)
  English 425—Modern Continental Drama (3)
  English 480—Literature and the Fine Arts, B.C. (3)
  English 481—Literature and the Fine Arts, A.D. (3)
  English 485—Literature and Human Values (3)
  Journalism 101—Newswriting (3)
  Journalism 464—High School Journalism (2)
  Speech 397—Forensics (3)
  Speech 434—Introduction to Speech Correction (3)
  Speech 467—History of Public Address (3)

Graduate (Fifth Year)

English 432—Popular Literature .... 3 unit
Language Arts 410—Language and Culture .... 3 unit

43–44 unit

SUGGESTED COURSE SEQUENCE FOR LANGUAGE ARTS MAJOR WITH GENERAL SECONDARY TEACHING CREDENTIAL

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Unit*
Lang. Arts 150A—Written and Oral Commun.	3	Lang. Arts 150B—Writ. & Oral Commun.	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3
Govt. 150—Govt. & Am. Soc.	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, Dance	3	Gen. Educ. elective	3
Phys. Educ. 150	1	Phys. Educ. elective	1
Elective	3	Elective	3

SOPHOMORE YEAR

Engl. 250—Underst. Lit	3	Minor	3
Hist. 250—U. S. History	3	Phil. 150—Phil. Ideas	3
*Anthro. 250—Cult. Anthro.	3	Gen. Educ. elective	3
Minor	6	Phys. Sci. 151—Prin. of Phys. Sci. *or* Bio. Sci. 153	3
		Elective	3

JUNIOR YEAR

Engl. 405—Linguistic Sci.	3	Engl. 406—Comm. of Ideas	3
Sp. 400—Group Discussion	3	Sp. 420—Oral Interpr.	3
Engl. 470—Masters, Am. Lit.	3	Engl. 471—Masters, Am. Lit.	3
Educ. 300—Intro. Cred. Prog.	N. Cr.	Sp. 465 High Sch. Sp. Arts	2
Educ. 413—Psych. & Soc.	5	Educ. 471—Sec. Educ.	5
H&S 350—Personal Health	2		

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* Recommended.

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Engl. 417—Interpr. Shakespeare	3	Am. Stud. 402—Ideas in Am.	3
Jour. 441—News. & Mag. Anal.	3	Sp. 468—Sp. Anal. & Eval.	3
Lang. Arts 464Y—Contem. Dr. Arts	3	Engl. 484—Contem. Wld. Lit.	3
Minor	6	Educ. 493—Methods (Major)	2
		(Minor)	2
		Elective	2

GRADUATE YEAR

Engl. 432—Pop. Lit.	3	Lang. Arts 410—Lang. & Cult.	3
Educ. 442—Dir. Teaching	3	Educ. 442—Dir. Teaching	3
Educ. 444Y—Problem Sec.	1	Educ. 444Z—Problems Sec.	2
Educ. 490—Audio-Vis.	2	Educ. 480—Counsel & Guid.	2
Minor	6	Elective	5

General Secondary Teaching Minor

The composite program in language arts is not available as a minor. Students wishing to minor in one of the language arts areas should see he English minor program, page 182 or the speech minor program, page 354.

MASTER OF ARTS DEGREE

. Prerequisites:
  a. A formal oral conference with the assigned graduate adviser is required before the student makes application for candidacy.
  b. Undergraduate preparation: The normal prerequisite for entry upon the master of arts program in language arts is a baccalaureate major in English, language arts, or speech. The graduate faculty will, however, consider applications from students who can meet all course prerequisites, and who have completed at least 24 units of approved upper division work in language arts fields directly related to their teaching objectives.

. Core courses in the "500" series .... 12 units
  English 505—Seminar in Language (3)
  Lang. Arts 506—Seminar in Communication Problems (3)
  Lang. Arts 510—Seminar in Theories of Language (3)
  Lang. Arts 598—Graduate Independent Study (3)

. Electives (with approval of adviser) .... 9 units
  Select Option A or B
    Option A
    Journalism 440—History and Philosophy of the Mass Media (3)
    *Journalism 441—Newspaper and Magazine Analysis (3)
    Journalism 520—Seminar in Journalism (3)
    Option B
    Speech 521—Seminar in Rhetoric (3)
    Speech 522—Seminar in Argumentation, Discussion and Debate (3)
    Speech 467—History of Public Address (3) *or*
    Speech 567—Studies in American Public Address (3)

. Outside the Division of Language Arts (with approval of adviser) .... 9 units
  Courses outside the field of language arts may be selected from related courses in philosophy, psychology and sociology.

. Final comprehensive examination.

30 units

American Studies 403—American Popular Culture (3) may be substituted if Journalism 441 has been completed in the B.A. program.

COURSES OF INSTRUCTION

150A-B Written and Oral Communication (3-3) Fall, Spring (General Education)

Year course in communication skills of speaking, writing, reading, and listening; emphasis on critical thinking; application of communication skills to practical problems of human affairs.

400 Ideas in America (3) Changed to American Studies 402. See p. 68

410 Language and Culture (3) Spring

The role of language in the development of cultural patterns, including the relationships between change in language and change in culture. Analysis of language as the matrix of culture.

464Y-Z Contemporary Dramatic Arts (3) Fall, Spring

Comparative analysis of the dramatic media: cinema, television, and stage. Emphasis on "great films" series, assigned television viewing, locally produced plays, and reading of representative dramatic selections as a basis for extended practice in comparison and evaluation. Consideration of the media as art forms. May be repeated for credit only with consent of instructor and when content changes substantially.

GRADUATE COURSES

506 Seminar in Communication Problems (3) Fall

Advanced study of factors influencing communication processes. Extended reading and application to problems in communication. Opportunity for individual projects.

510 Seminar in Theories of Language (3)

Studies and criticism of theories of language held in various times and cultures and of their implications for communication.

598 Graduate Independent Study

Guided reading geared to the individual student's needs.

MATHEMATICS

(In the Division of Science and Mathematics)

STAFF: Clark, C. (Department Head), Arnold, Cullen, Diamond, Eckert, Jaqua, Lewis, Overholtzer, Pitts, Vanderburg. *Part-time:* Horwitz, Koch, Laing, Marer, Ortell, Stutesman, Sydnor.

Mathematics is the science of size and shape and the art of concise and precise communication. As such, it is both an intensely vital and necessary subject in itself and an essential part of the curricula of science, business, and engineering.

A major in mathematics prepares the student to teach in secondary schools, work as a research assistant in industry and government, enter graduate school to prepare for positions on college staffs or for superior positions in industry and government.

Each of the three majors to be described may be obtained in four years provided adequate preparation has been secured in high school, e.g., algebra (2 years), geometry, trigonometry. If the student has not had this preparation or if his command of these subjects is weak, he may be advised to strengthen his knowledge before attempting college mathematics.

BACHELOR'S DEGREE CURRICULA

Bachelor of Arts Major in Mathematics

This is the standard B.A. degree curriculum and is designed to prepare students for graduate work in mathematics.

Lower Division

Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units
Mathematics 203—Analytic Geometry and Calculus III	4 units
Physics 201—General Physics I	4 units
Physics 202—General Physics II	4 units
Physics 203—General Physics III	4 units

Upper Division

Mathematics 401—Differential Equations	3 units
Mathematics 461—Advanced Calculus I	3 units
Mathematics 462—Advanced Calculus II	3 units
Select from the following	3 units
Mathematics 430—Introduction to Modern Geometry (3)	
Mathematics 432—Higher Geometry (3)	
Select from the following	3 units
Mathematics 340—Theory of Algebraic Equations (3)	
Mathematics 442—Linear Algebra and Matrices (3)	
Mathematics 444—Modern Algebra (3)	
Elective courses in upper division mathematics	9 units
	52 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR MATHEMATICS MAJOR (B.A. Degree)

First semester	*Units*	*Second semester*	*Unit*
FRESHMAN YEAR			
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Math. 100—Basic Math. Anal.	4	Math. 201—Anal. Geom. & Calc. I	4
Govt. 150—Govt. & Am. Soc.	3	Physics 201—Gen. Physics I	4
Elective	2	Phys. Educ. elective	1
Phys. Educ. 150	1		
SOPHOMORE YEAR			
Math. 202—Anal. Geom. & Calc. II	4	Math. 203—Anal. Geom. & Calc. III	4
Physics 202—Gen. Physics II	4	Physics 203—Gen. Physics III	4
Phil. 150—Phil. Ideas	3	Art 150—Art, Music, Dance	3
Psych. 150—Human Behavior	3	Engl. 250—Underst. Lit.	3
Elective	2	Elective	2
JUNIOR YEAR			
Math. 401—Diff. Equations	3	Math. 430 or Math. 432	3
Math. 340, 442, or 444	3	Upper Div. Math. elective	3
Hist. 250—U. S. History	3	Gen. Educ. elective	3
Gen. Educ. Soc. Sci. elective	3	Electives	6
H&S 350—Personal Health	2		
Elective	2		
SENIOR YEAR			
Math. 461—Adv. Calculus I	3	Math 462—Adv. Calculus II	3
Upper Div. Math. elective	3	Upper Div. Math. elective	3
Gen. Educ. elective	3	Electives	9
Electives	6		

Bachelor of Science Major in Mathematics

The B.S. degree curriculum (132 units) is designed to prepare a student for a position in business, industry or government as well as for graduate work in mathematics.

Lower Division

Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units
Mathematics 203—Analytic Geometry and Calculus III	4 units
Physics 201—General Physics I	4 units
Physics 202—General Physics II	4 units
Physics 203—General Physics III	4 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units

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* See "Note" on page 55.

Upper Division

Mathematics 401—Differential Equations	3 units
Mathematics 461—Advanced Calculus I	3 units
Mathematics 462—Advanced Calculus II	3 units
Select from the following	3 units
Mathematics 430—Introduction to Modern Geometry (3)	
Mathematics 432—Higher Geometry (3)	
Select from the following	3 units
Mathematics 340—Theory of Algebraic Equations (3)	
Mathematics 442—Linear Algebra and Matrices (3)	
Mathematics 444—Modern Algebra (3)	
Three of the following upper division mathematics courses:	9 units
Mathematics 370—Digital Computer Programming (3)	
Mathematics 403—Partial Differential Equations (3)	
Mathematics 405—Laplace Transform (3)	
Mathematics 410—Vector and Tensor Analysis (3)	
Mathematics 470—Numerical Calculus (3)	
Mathematics 475—Introduction to Mathematical Statistics I (3)	
	62 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR MATHEMATICS MAJOR (B.S. Degree)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	Math. 201—Anal. Geom. and Calc. I	4
Govt. 150—Govt. and Am. Soc.	3	Chem. 102—Gen. Chem. and Qual. Anal.	5
Phys. Educ. 150	1	Physics 201—Gen. Physics I	4
Math. 100—Basic Math. Anal.	4	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Chem. 101—Gen. Chem.	5		

SOPHOMORE YEAR

Math. 202—Anal. Geom. and Calc. II	4	Math. 203—Anal. Geom. and Calc. III	4
Physics 202—Gen. Physics II	4	Physics 203—Gen. Physics III	4
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, Dance	3	Engl. 250—Underst. Lit.	3
Phil. 150—Phil. Ideas	3	Phys. Educ. elective	1

JUNIOR YEAR

Math. 401—Diff. Equations	3	Math. 430 or Math. 432	3
Math. 340, 442, or 444	3	Math. elective from appr. list	3
Hist. 250—U. S. History	3	Electives	8
Gen. Educ. Soc. Sci. elective	3	Gen. Educ. elective	3
H&S 350—Personal Health	2		
Elective	3		

SENIOR YEAR

Math. 461—Adv. Calculus I	3	Math. 462—Adv. Calculus II	3
Math. elective from appr. list	3	Math. elect. from appr. list	3
General Educ. elective	3	Electives	11
Electives	8		

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* See "Note" on page 55.

General Secondary Teaching Major

This B.A. degree curriculum is designed for students who plan to become secondary teachers. If graduate mathematics is anticipated, elective courses in upper division mathematics should include Mathematics 401. See also pages 140-141 for professional education requirements. A teaching minor in a different field is also required for a teaching credential.

Lower Division

Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units
Mathematics 203—Analytic Geometry and Calculus III	4 units

Upper Division

Mathematics 320—Selected Topics in the History of Mathematics	3 units
Mathematics 420—Overview of Secondary Mathematics	3 units
Select from the following	3 units
Mathematics 430—Introduction to Modern Geometry (3)	
Mathematics 432—Higher Geometry (3)	
Select from the following	3 units
Mathematics 340—Theory of Algebraic Equations (3)	
Mathematics 442—Linear Algebra and Matrices (3)	
Mathematics 444—Modern Algebra (3)	
Select from the following	3 units
Mathematics 370—Digital Computer Programming (3)	
Mathematics 401—Differential Equations (3)	
Mathematics 470—Numerical Calculus (3)	
Mathematics 475—Introduction to Mathematical Statistics I (3)	
Elective courses in upper division mathematics	9 units
	40 units

SUGGESTED COURSE SEQUENCE FOR MATHEMATICS MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. & Am. Soc.	3	Art 150—Art, Music, Dance	3
Phys. Educ. 150	1	Phys. Educ. elective	1
Math. 100—Basic. Math. Anal.	4	Math. 201—Anal. Geom. & Calc. I	4
Elective	2	Elective	2

SOPHOMORE YEAR

Math. 202—Anal. Geom. & Calc. II	4	Math. 203—Anal. Geom. & Calc. III	4
Phil. 150—Phil. Ideas	3	Math. 320—Hist. of Math.	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Engl. 250—Underst. Lit.	3
Psych. 150—Human Behavior	3	Hist. 250—U. S. History	3
Elective	3	Gen. Educ. Soc. Sci. elective	3

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* See "Note" on page 55.

JUNIOR YEAR

First Semester	*Units*	*Second Semester*	*Units*
Math. 340, 442, or 444	3	Upper Div. Math. elective	3
Upper Div. Math. elective	3	Math. 430 or Math. 432	3
H&S 350—Personal Health	2	Gen. Educ. elective	3
Minor	8	Educ. 413—Psych. & Soc.	5
Educ. 300—Intro. Cred. Prog.	N.Cr.		

SENIOR YEAR

Math. 420—Sec. Overview	3	Upper Div. Math. elective	3
Upper Div. Math. elective	3	Educ. 493—Methods (Major-2) (Minor-2)	4
Minor	3	Minor	3
Educ. 471—Sec. Educ.	5	Gen. Educ. elective	3
		Elective	3

GRADUATE (FIFTH) YEAR

Minor	5	Minor	3
Educ. 442Y—Directed Teach.	3	Educ. 442Z—Directed Teach.	3
Educ. 444Y—Problem Sec.	1	Educ. 444Z—Problem Sec.	2
Educ. 490—Audio-Vis.	2	Educ. 480—Counsel. & Guid.	2
Electives	4	Electives	5

General Secondary Teaching Minor

Designed for students who plan to become secondary teachers. See also pages 140-141 for professional requirements. A teaching major in a different teaching field is also required.

Lower Division

Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units

Upper Division

Mathematics 320—Selected Topics in the History of Mathematics	3 units
Mathematics 420—Overview of Secondary Mathematics	3 units
Select from the following	3-4 units

- Mathematics 203—Analytic Geometry and Calculus III (4)
- Mathematics 340—Theory of Algebraic Equations (3)
- Mathematics 430—Introduction to Modern Geometry (3)
- Mathematics 432—Higher Geometry (3)
- Mathematics 442—Linear Algebra and Matrices (3)
- Mathematics 444—Modern Algebra (3)
- Mathematics 475—Introduction to Mathematical Statistics I (3)

21-22 units

MASTER OF ARTS DEGREE

General information regarding admission to graduate standing, advancement to candidacy, and college requirements for graduation may be found on pages 60-65 of this catalog.

OPTION 1—FOR TEACHERS

Prerequisite: The candidate's preliminary training should be substantially th equivalent of that required for the general secondary teaching major in mathematics.

Requirements:

(a) *Course and Unit Requirements:*

Mathematics 461—Advanced Calculus I	3 unit
Mathematics 462—Advanced Calculus II	3 unit
Mathematics 550—Seminar	3 unit
One of the following	3 unit
Mathematics 580—Functions of Real Variables (3)	
Mathematics 582—Functions of Complex Variables (3)	
One of the following	3 unit
Mathematics 540—Abstract Algebra (3)	
Mathematics 530—Topology (3)	
Elective courses outside the department of mathematics but related to the program	6 unit
Elective courses in mathematics with graduate credit to total	30 unit

(b) *At least 12 units of 500 series courses* must be included, of which at least must be in mathematics as indicated above.

(c) All candidates must pass an *oral examination* administered by the mathematics department in the last semester of candidacy.

(d) Plan A or Plan B must be satisfactorily performed.

Plan A: The student may elect to write a *thesis* by registering for Mathematics 599. Not more than 3 units of Mathematics 599 will be granted i the thesis is acceptable. These units may be included among the 30 required for the degree.

Plan B: A comprehensive *written examination* may be chosen in lieu of thesis. No unit credit will be given for such.

(e) No *foreign language* will be required. Undergraduate students will be advised to take at least one foreign language, and graduate students will b advised that most Ph.D. degree programs require a reading proficiency ir two foreign languages.

OPTION 2—FOR INDUSTRY AND FURTHER GRADUATE PROGRAMS

Prerequisite: The candidate's preliminary training should be substantially the equivalent of that required for the Bachelor of Arts liberal arts major in mathematics.

Requirements:

(a) *Course and Unit Requirements:*

Mathematics 580—Functions of Real Variables	3 units
Mathematics 582—Functions of Complex Variables	3 units
Mathematics 550—Seminar	3 units
Select from the following (if not previously taken)	6 units
Mathematics 403—Partial Differential Equations (3)	
Mathematics 405—Laplace Transform (3)	
Mathematics 410—Vector and Tensor Analysis (3)	
Mathematics 470 or 471—Numerical Calculus (3)	
Elective courses outside the department of mathematics but related to the program, usually from physics or engineering but occasionally from business, the biological and social sciences	6 units
Elective courses in mathematics with graduate credit to total	30 units

(b), (c), (d), (e) same as for Option I.

COURSES OF INSTRUCTION

00 Basic Mathematical Analysis (4) Fall, Spring

Prerequisite: Two years of high school mathematics (algebra, geomry, or trigonometry) or the equivalent. College algebra, trigonometry nd elementary statistics to include number system, graphs, functions, quations, exponents, logarithms, inequalities, trigonometry with emhasis upon analysis, standard deviation, correlation coefficient.

20 College Arithmetic (3) Fall, Spring

Designed primarily for prospective elementary teachers, but open to thers. Objectives are understanding and appreciation of the fundanentals of arithmetic, with some attention to historical and recreational spects.

40 Basic Mathematics for Business and Social Sciences (3) Fall, Spring

Fundamental concepts and skills in arithmetic and algebra needed in usiness and social sciences.

01 Analytic Geometry and Calculus I (4) Fall, Spring

Prerequisites: Mathematics 100 or equivalent. Analytic geometry of he straight line, function, limit, derivative of algebraic functions, inegral, maxima, minima, area and a variety of simple applications.

02 Analytic Geometry and Calculus II (4) Fall, Spring

Prerequisite: Mathematics 201. Derivatives and integrals of trigoometric, inverse trigonometric, logarithmic, and exponential functions, nalytic geometry of conic sections, translation and rotation of axes, olar co-ordinates, additional applications of differentiation and inegration.

03 Analytic Geometry and Calculus III (4) Fall, Spring

Prerequisite: Mathematics 202. Infinite series, Taylor's and Macaurin's theorems, analytic geometry of three dimensions, functions of everal variables, partial differentiation, multiple integrals, areas, volmes, work, moments and other applications to physics and engineering.

40 Introductory Mathematical Analysis for Business (3) Fall, Spring

Prerequisite: Satisfactory score on an algebra proficiency test to be dministered to all entering business majors. Graphical analysis; elemenary differential and integral calculus, with applications to business and conomics.

02 Advanced Engineering Mathematics (3) Fall, Spring

Prerequisite: Mathematics 203. Ordinary differential equations, simulaneous ordinary differential equations, linear independence and Wronkians, power series solutions, Fourier series, partial differential equations.

320 Selected Topics in the History of Mathematics (3)
Fall, Spring

Prerequisite: Mathematics 202 (may be taken concurrently). Trace the development of fundamental concepts and techniques in the field of algebra, geometry and trigonometry.

340 (440) Theory of Algebraic Equations (3) Fall

Prerequisite: Mathematics 202. Complex numbers, properties of polynomials, with especial reference to the field concept; equations in th fields of rational numbers, real numbers. Elimination, resultants; algebraic extensions of a field, cubic equations, constructability problems.

353 Mathematics for General Education (3) Fall, Spring

Prerequisite: Mathematics 120 or equivalent. Vital concepts; elementary aspects of new developments in mathematics. Designed for student of the arts and social sciences; includes number system; units and arithmetic of computation; various relationships between quantities; notion of probability; elementary selections from modern mathematics, e.g. logic of electronic computers, truth tables, political structures, game of strategy; new horizons.

370 Digital Computer Programming (3) Fall, Spring

Prerequisite: Mathematics 201. Functions and features of digital computers; flow charts, commands, controls, debugging, subroutines, compilers; prime objective: student choice of problem from field o mathematics and/or the several sciences, personal preparation of program and use of computer.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regula group meetings.

401 Differential Equations (3) Fall, Spring

Prerequisite: Mathematics 203. Beginning course in differentia equations emphasizing their application in science and engineering.

403 Partial Differential Equations (3) Fall

Prerequisite: Mathematics 401. Partial differential equations, partia differential equations of classical physics, orthogonal sets of functions Fourier series and integrals, Bessel functions, Legendre polynomials solutions of boundary value problems, applications to heat flow, flui flow, vibrations of strings and membranes, potential theory.

405 Laplace Transform (3) Fall

Prerequisite: Mathematics 461 or equivalent. The Laplace transform use in solving linear ordinary and partial differential equations, solutio of boundary value problems, applications to transient electrical an dynamic phenomena.

410 Vector and Tensor Analysis (3)

Prerequisite: Mathematics 203. Vector algebra and calculus, vecto fields, gradient, divergence, curl, divergence theorem, Stokes' theorem lgebra and calculus of tensors, applications to geometry, potential heory and mathematical physics.

20 Overview of Secondary Mathematics (3) Fall, Spring

Prerequisite: Mathematics 202. Study of subject-matter of secondary nathematics, including selections from "modern" mathematics, directed oward a thorough understanding of basic concepts and ideas.

30 Introduction to Modern Geometry (3) Fall, Spring

Prerequisite: Mathematics 202. Study of some of the synthetic gemetry developed since the time of Euclid: a brief survey of non-uclidean geometry.

32 Higher Geometry (3) Fall, Spring

Prerequisite: Mathematics 202. Homogeneous and projective co-ordintes, invariants, duality, Desargues' and Pappus' theorems, transformaons, synthetic and analytic treatment of conics.

42 Linear Algebra and Matrices (3) Spring

Prerequisite: Mathematics 202. Linear transformations, matrices and eterminants, algebra of matrices, quadratic forms, characteristic values, duction of matrices to canonical form.

44 Modern Algebra (3) Fall, Spring

Prerequisite: Mathematics 203 or consent of instructor. Introducon to some of the principal concepts of modern algebra, including tegral domains, groups, rings, and fields, as well as vector spaces and atrices.

1 Advanced Calculus I (3) Fall

Prerequisite: Mathematics 203. Extension of the techniques and ideas analysis into higher fields essential to more advanced or graduate ork. Includes advanced study of functions of several variables, partial fferentiation with applications, multiple integrals, line and surface tegrals.

2 Advanced Calculus II (3) Spring

Prerequisite: Mathematics 461 or equivalent. Continuation of Matheitics 461. Includes infinite series of several types, uniform convergence, proper integrals, special functions.

0 Numerical Calculus (3) Fall

Prerequisite: Mathematics 203. Designed to bridge gap between issroom mathematics and such applications as the calculations in airift industry or in actuarial work. Includes solution of equations (inding methods of approximation), interpolation, numerical integration.

1 Numerical Calculus (3) Spring

Prerequisite: Mathematics 401. Numerical solution of differential iations. Includes finite differences, orthogonal polynomials, least iares, harmonic analysis, smoothing of data.

475 (381) Introduction to Mathematical Statistics I (3) Fall
Prerequisite: Mathematics 202. Basic course in theory and applicatio of statistical methods. Theoretical and empirical frequency distributior of one or two variables. Large and small sample theory. Correlation.

476 (382) Introduction to Mathematical Statistics II (3) Spring
Prerequisite: Mathematics 475. Nonparametric methods. Testin "goodness of fit." Testing statistical hypotheses. Design of experiment

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability t assume responsibility for independent work and to prepare written an oral reports. Project selected in conference with sponsor before registr tion; progress meetings held regularly.

GRADUATE COURSES

530 Topology (3) Spring
Prerequisite: Graduate standing in mathematics. Basic concepts point set topology; metrization; compactness and separation properti of spaces; mappings; homology; combinatorial topology.

540 Abstract Algebra (3) Fall
Prerequisites: Mathematics 444 or consent of instructor. Theory groups, rings, integral domains and ideals; field extensions; Galo theory.

550 Seminar (3) Fall, Spring
Prerequisite: Graduate standing in mathematics. A study of one ar of mathematics not usually offered in college courses, e.g., integr equations, theory of games, inequalities, summability, unique approach to topics in elementary mathematics at all grade levels, current researc problems; development of ability to use and organize journal an reference materials for effective presentation.

580 Functions of Real Variables (3) Spring
Prerequisites: Mathematics 461 or 203 and consent of instructor. Crit cal development of real number system, limits, continuity, infinit processes, Riemann and Stieltjes integration, introduction to theory measure and Lebesgue integration.

582 Functions of Complex Variables (3) Fall
Prerequisites: Mathematics 461 or 203 and consent of instructor. Com plex numbers, analytic functions, elementary functions, series, Cauch theory, theory of residues, conformal mapping, Schwarz-Christoff transformation, applications to heat flow, fluid flow, potential theory.

599 Graduate Project (3) Fall, Spring
Prerequisite: Graduate standing in mathematics. Directed research an thesis development.

MICROBIOLOGY AND PUBLIC HEALTH

(In the Division of Science and Mathematics)

STAFF: Anderson (Department Head), Andreoli, Bair, Griesel, Tamblyn. *Part-time:* Heidbreder, Senn.

BACHELOR'S DEGREE CURRICULA

Major in Microbiology

The major program in microbiology is designed to provide adequate basic training in microbiology and related fields, such as chemistry. It will qualify a student for (a) graduate study in the field; (b) various types of federal employment; (c) work in the state civil service system, particularly as a public health microbiologist; (d) industrial microbiological work in such divergent fields as the pharmaceutical industry, brewing, industrial fermentations and the dairy industry; (e) entrance into medical and dental school (by selecting a small number of additional elective courses); (f) work as a hospital microbiologist; (g) positions as research technicians in various university research projects.

Lower Division

Microbiology 200—General Microbiology	5 units
Botany 100—General Botany or Zoology 100—General Zoology	5 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Chemistry 201—Quantitative Analysis I	3 units
Mathematics 100—Basic Mathematical Analysis	4 units
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units

Upper Division

Microbiology 302AB—Medical Bacteriology and Public Health Methods	10 units
Microbiology 401—Viruses	2 units
Microbiology 430—Microbial Physiology and Cytology	5 units
Microbiology 440—Systematic Bacteriology	2 units
Chemistry 401AB—Organic Chemistry	6 units
Chemistry 403AB—Organic Chemistry Laboratory	2 units
Chemistry 431—Biochemistry I	4 units
Chemistry 432—Biochemistry II	4 units
	70 units

Major in Medical Technology

The following program has been approved for training of medical laboratory technicians. A total of 132 units is required for graduation with a major in medical technology. (Bachelor of Science Degree)

On completion of this major and an internship a student will be eligi ble to take the examination to become a Registered Medical Technolo gist. This will lead to employment in hospitals, public health labora tories and certain private, state and federal research laboratories.

Lower Division

Mathematics 100—Basic Mathematical Analysis	4 unit
Microbiology 200—General Microbiology	5 unit
Chemistry 101—General Chemistry	5 unit
Chemistry 102—General Chemistry and Qualitative Analysis	5 unit
Chemistry 201—Quantitative Analysis	3 unit
Physics 101—Physics I	4 unit
Physics 102—Physics II	4 unit
Zoology 100—General Zoology	5 unit

Upper Division

Microbiology 302AB—Medical Bacteriology and Public Health Methods	10 unit
Microbiology 320—Hematology	2 unit
Microbiology 340—Medical Mycology	2 unit
Microbiology 401—Viruses	2 unit
Biological Science 420—Histological Methods	3 unit
Zoology 462—Parasitology	3 unit
Chemistry 401AB—Organic Chemistry	6 unit
Chemistry 403AB—Organic Chemistry Laboratory	2 unit
Chemistry 431—Biochemistry I	4 unit
Chemistry 432—Biochemistry II	4 unit
Chemistry 433—Chemical Biochemistry	3 unit
	76 unit

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR MICROBIOLOGY MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Unit*
*Engl. 150—Written Expr. *or*		Chem. 102—Gen. Chem.	5
Lang. Arts 150A	3	Zool. 100—Gen. Zool. *or*	
Chem. 101—Gen. Chem.	5	Botany 100—Gen. Botany	5
Math. 100—Basic Math. Anal.	4	*Sp. 150—Oral Expr. *or*	
Phys. Educ. 150	1	Lang. Arts 150B	3
Govt. 150—Govt. and Am. Soc.	3	Phys. Educ. elective	1
		Art 150—Art, Music, Dance	3

SOPHOMORE YEAR

Micro. 200—Gen. Micro.	5	Chem. 201—Quant. Anal.	3
Physics 101—Physics I	4	Physics 102—Physics II	4
Phil. 150—Phil. Ideas	3	Engl. 250—Underst. Lit.	3
Psych. 150—Human Behavior	3	Hist. 250—U. S. History	3
		Gen. Educ. Soc. Sci. elective	3

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* See "Note" on page 55.

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
icro. 302A—Med. Bact.	5	Micro. 302B—Med. Bact.	5
hem. 401A—Org. Chem.	3	Chem. 401B—Org. Chem.	3
hem. 403A—Org. Chem. Lab.	1	Chem. 403B—Org. Chem. Lab.	1
icro. 440—System. Bact.	2	Gen. Educ. elective	3
&S 350—Personal Health	2	Elective	3
lective	3		

SENIOR YEAR

hem. 431—Biochemistry I	4	Chem. 432—Biochemistry II	4
icro. 401—Viruses	2	Micro. 430—Physio. and Cytol.	5
en. Educ. elective	3	Electives	6
lectives	7		

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR MEDICAL TECHNOLOGY MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
hem. 101—Gen. Chem.	5	Chem. 102—Gen. Chem.	5
ath. 100—Basic Math. Anal.	4	Zool. 100—Gen. Zool.	5
Engl. 150—Written Expr. *or* ang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
ovt. 150—Govt. and Am. Soc.	3	Art 150—Art, Music, Dance	3
hys. Educ. 150	1	Phys. Educ. elective	1

SOPHOMORE YEAR

icro. 200—Gen. Micro.	5	Chem. 201—Quant. Anal.	3
hysics 101—Physics I	4	Physics 102—Physics II	4
hil. 150—Phil. Ideas	3	H&S 350—Personal Health	2
sych. 150—Human Behavior	3	Engl. 250—Underst. Lit.	3
		Hist. 250—U. S. History	3

JUNIOR YEAR

icro. 302A—Med. Bact.	5	Micro. 302B—Med. Bact.	5
hem. 401A—Org. Chem.	3	Micro. 340—Med. Mycol.	2
hem. 403A—Org. Chem. Lab.	1	Chem. 401B—Org. Chem.	3
en. Educ. Soc. Sci. elective	3	Chem. 403B—Org. Chem. Lab.	1
icro. 320—Hematology	2	Gen. Educ. elective	3
lective	3	Electives	3

SENIOR YEAR

iol. Sci. 420—Hist. Methods	3	Micro. 401—Viruses	2
ool. 462—Parasitology	3	Chem. 432—Biochemistry II	4
hem. 431—Biochemistry I	4	Chem. 433—Clinical Biochemistry	3
en. Educ. elective	3	Electives	7
lective	4		

COURSES OF INSTRUCTION

00 General Microbiology (5)

Prerequisites: Chemistry 101, Botany 100, or Zoology 100. Basic prin-iples of microbiology. Emphasizes nature, distribution, physiological ctivities of micro-organisms; place of micro-organisms in nature; micro-

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See "Note" on page 55.

biology of water, soil, dairy products, other foods, and industrial applications; medical aspects; microbiological techniques. For majors i microbiology and related fields. Lecture three hours; laboratory si hours.

302A Medical Bacteriology and Public Health Methods (5) Fall
Prerequisite: Microbiology 200. Study of major disease producin bacteria; mechanisms of pathogenicity and immunity reactions; serological and other diagnostic procedures for identification of pathogeni bacteria; public health procedures and problems. Lecture three hours laboratory six hours.

302B Medical Bacteriology and Public Health Methods (5) Spring
Continuation of 302A; emphasis on serological methods. Lecture thre hours; laboratory six hours.

320 Hematology (2) Fall, Spring
Prerequisite: Zoology 100 or course in physiology. Basic principle of hematology; experience in making complete blood counts, hemoglobin determinations, typing and cross-matching, and other relate procedures. Lecture one hour; laboratory three hours.

340 Medical Mycology (2) Fall, Spring
Prerequisite: Microbiology 200. Introduction to pathogenic fung commonly responsible for mycotic infections of man. Lecture one hour laboratory three hours.

360 Sanitary Bacteriology (3)
Prerequisite: College chemistry. Fundamentals of bacteriology as specifically applied to engineering. Emphasizes water testing and treatment microbiology of sewage disposal; applications in problems for food processing, refrigeration, and air conditioning. Lecture two hours; laboratory three hours.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-stud program. Analysis and reports of the student's performance; regula group meetings.

401 Viruses (2) Fall, Spring
Prerequisite: Microbiology 200. Consideration of virus and rickettsia diseases of man and animals. Lecture two hours and demonstrations.

420 Food Microbiology (4)
Prerequisites: Microbiology 200, and Chemistry 401AB. Study o micro-organisms of importance in food industries with special referenc on spoilage, preservation, fermentations and food borne infections. Lecture three hours; laboratory three hours.

425 Soil Microbiology (4)
Prerequisite: Microbiology 200 and Chemistry 401AB. Microflora an microfauna of the soil, their importance in economy of nature; characteristics and activities of major physiological groups; special laborator techniques involved; practical considerations.

30 **Bacterial Physiology and Cytology** (5) Spring
Prerequisite: Microbiology 200, Chemistry 431. Study of activities nd functions of bacteria with emphasis on structure, growth, nutriion, and metabolism.

40 **Systematic Bacteriology** (2) Fall
Prerequisite: Microbiology 200. Relationship of bacteria to other livng forms; rules of nomenclature; systematics as applied to the orders, amilies, and genera of the Schizomycetes.

99 **Independent Study** (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to ssume responsibility for independent work and to prepare written and ral reports. Project selected in conference with the sponsor before egistration; progress meetings held regularly.

10 **Microbial Genetics** (2)
Prerequisites: Microbiology 200 and Biological Science 410 or equivaents. Concepts of microbial genetics including, dissociation, transformaion, transduction, gene transfer, and biochemical mutation; laboratory echniques; practical aspects such as antibiotic resistance. Lecture one our; laboratory three hours.

PUBLIC HEALTH

10 **Physical Principles of Sanitation** (3) Fall
Techniques in general sanitation covering construction and maintenance of water facilities, filters, sewage disposal, heating, ventilation, ighting, plumbing, and housing.

11 **Environmental Sanitation Control** (3) Spring
Prerequisite: Public Health 310 or consent of instructor. Study of vaste disposal, insect, rodent, and nuisance control, control of food, nd housing sanitation.

12 **Community Control of Communicable Diseases** (3) Spring
Prerequisite: Public Health 310 or consent of instructor. Epidemilogy, modes of transmission, and community control of communicable liseases, including tuberculosis and the venereal infections.

13 **Public Health Administration** (3) Fall
Prerequisite: Public Health 310 or consent of instructor. Study of gencies dealing with sanitation. Organization of health departments, ffice procedures, laws and legal regulations, and public relations.

20 **Public Health Microbiology** (4) Spring
Prerequisite: Microbiology 200 or consent of instructor. Sanitary nd laboratory applications of microbiology considering particularly vater-borne diseases, water testing and treatment, sewage disposal, milk esting, food testing, restaurant and air sanitation. Lecture three hours; aboratory three hours.

MUSIC

(In the Division of Fine Arts)

STAFF: Snyder (Department Head), Albersheim, Andreas, Baxter, Beckstead Griffith, Hansen, Hubbard, Knox, Kopp, Leidig, Mullins, Nichols, Runge, Schlic stett, Schubert, Susca, Timmerman, Wood.

BACHELOR'S DEGREE CURRICULA

Curricula in music are designed for (1) those seeking one of the several teaching credentials; (2) those who are preparing for a professiona career in performance, arranging, composition, or writing; (3) thos who have avocational interests in music; and (4) those who seek experiences which will extend and enrich their general cultural background Two patterns for the fulfillment of degree requirements are offered one providing for considerable freedom of election for those student motivated by musical interests other than teaching in the public schools and one satisfying the requirements for the special or general secondary credential.

Major in Music

Lower Division	
Music 160AB—Theory I and II and Piano Laboratory	8 units
Music 260AB—Theory III and IV and Solo Performance Laboratory	6 units
Music 231A—Functional Voice for Music Majors	2 units
Select from the following	4 units
Music 110 sp, bw (2-2)	
Music 210 s,b,w,p (2-2-2-2)	
Select from the following	3 units
Music 320 S-Z—Band (1-1-1-1-1-1-1-1)	
Music 321 S-Z—Orchestra (1-1-1-1-1-1-1-1)	
Music 326 S-Z—A Cappella Choir (1-1-1-1-1-1-1-1)	
Music 327 S-Z—Chorus (1-1-1-1-1-1-1-1)	
Upper Division	
Music 360—Orchestration and Arranging	2 units
Music 370AB—History of Music in Western Civilization	6 units
Music 381—Choral Conducting	2 units
Music 340AB—Functional Piano	2 units
Select from the following	3 units*
Music 415 S-Z—Advanced Strings (1-1-1-1-1-1-1-1)	
Music 416 S-Z—Advanced Woodwinds (1-1-1-1-1-1-1-1)	
Music 417 S-Z—Advanced Brass (1-1-1-1-1-1-1-1)	
Music 418 S-Z—Advanced Percussion (1-1-1-1-1-1-1-1)	
Music 435 S-Z—Advanced Voice (1-1-1-1-1-1-1-1)	
Music 445 S-Z—Advanced Piano (1-1-1-1-1-1-1-1)	
Music 446 S-Z—Advanced Organ (1-1-1-1-1-1-1-1)	
Select from the following	4 units
Music 320 S-Z—Band (1-1-1-1-1-1-1-1)	
Music 321 S-Z—Orchestra (1-1-1-1-1-1-1-1)	
Music 326 S-Z—A Cappella Choir (1-1-1-1-1-1-1-1)	
Music 327 S-Z—Chorus (1-1-1-1-1-1-1-1)	
	42 units

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* The student majoring in Music must present a satisfactory public recital during his Senior year before he may be recommended for the degree.

All entering students will be required to perform on their major instruments for a faculty committee. The purpose of this audition is to aid the staff in properly advising the student for the balance of his college program. These auditions will be repeated when the student enters the upper division and at the beginning of the senior year. For those students transferring from another college, a placement examination is given in the history of music and theory. Students demonstrating competence in excess of minimum requirements in performance and theory may earn advanced standing as a result of these examinations and auditions.

The schedule for these examinations and auditions may be obtained from the Music Department office.

Because the Music Major student must have begun his individual and group performance preparation prior to beginning his college career, it is permissible and proper for a lower division student to register for and earn credits in upper division performance courses.

Special Secondary Teaching Major

Designed for those who expect to teach music in the public elementary or secondary schools. See also pages 140-142 for professional education requirements. Two curricular pathways are provided for the satisfaction of credential requirements. One emphasizes choral teaching skills, the other instrumental skills.

Choral Focus	
Music Major Requirements	42 units
Music 231B—Functional Voice for Music Majors	2 units
Music 382—Instrumental Conducting	2 units
Select from the following:	2 units
Music 405—Piano Methods (2)	
Music 406—Vocal Pedagogy (2)	
Music 465—Choral Arranging (2)	
	48 units
Instrumental Focus	
Music Major Requirements	42 units
Select from the following: (courses not selected as part of music major core)	4 units
Music 210s—Stringed Instruments (2)	
Music 210b—Brass Instruments (2)	
Music 210w—Woodwind Instruments (2)	
Music 210p—Percussion Instruments (2)	
Music 382—Instrumental Conducting	2 units
	48 units

NOTE: Candidates for the special or general secondary credential must have completed Music 340AB, at least one Education 493 methods course in music, and Music 381 prior to enrolling for directed teaching. Those students who expect an instrumental directed teaching assignment must also have completed the Music 210 requirements of the credential program.

Those students who have completed their music requirements for the special or general secondary credential at another institution must complete at least four units in music courses and participate in one performance organization at Los Angeles State College before they may expect to obtain the department's recommendation for directed teaching.

General Secondary Teaching Major

The music requirements for the general secondary credential in music are the same as those for the special secondary credential. See also pages 140-141 for professional education requirements. A teaching minor in a different teaching field and a graduate year including additional professional education courses are required for the general secondary credential.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR MUSIC MAJOR (Noncredential)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Music 160A—Theory I	4	Music 160B—Theory II	4
Music 110 sp—Orches. Instruments	2	Music 110 bw—Orches. Instruments	2
Music 415, 416, 417, 435, 445, or 446	1	Music 231A—Func. Voice	2
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Spch. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Art 150—Art, Music, Dance	3
Phys. Educ. 150	1	Phys. Educ. elective	1

SOPHOMORE YEAR

Music 260A—Theory III	3	Music 260B—Theory IV	3
Phil. 150—Phil. Ideas	3	Music 415, 416, 417, 435, 445, or 446	1
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Music 320, 321, 326, or 327	1
Psych. 150—Human Behavior	3	Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3
Elective	4	Engl. 250—Underst. Lit.	3
		Govt. 150—Govt. & Am. Soc.	3
		Elective	2

JUNIOR YEAR

Music 370A—Hist. of Music	3	Music 370B—Hist. of Music	3
Music 360—Orchest. & Arrange.	2	Music 381—Choral Conduct.	2
Music 340A—Funct. Piano	1	Music 340B—Funct. Piano	1
Music 320, 321, 326, or 327	1	Music 320, 321. 326, or 327	1
Gen. Educ. Soc. Sci. elective	3	H&S 350—Personal Health	2
Hist. 250—U. S. History	3	Elective	6
Elective	2		

SENIOR YEAR

Music 320, 321, 326, or 327	1	Music 415, 416, 417, 435, 445, or 446	1
Gen. Educ. elective	3	Music 320, 321, 326, or 327	1
Electives	12	Gen. Educ. elective	3
		Electives	11

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* See "Note" on page 55.

SUGGESTED COURSE SEQUENCE FOR MUSIC MAJOR WITH SPECIAL SECONDARY CREDENTIAL

(Instrumental Focus)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Music 160A—Theory I	4	Music 160B—Theory II	4
Music 210p—Percussion Instr.	2	Music 210s—Stringed Instr.	2
Music 415, 416, 417, 435, 445, or 446	1	Music 281A—Funct. Voice	2
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	Music 320, 321, 326, or 327	1
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	*Spch. 150—Oral Expr. *or* Lang. Arts 150B	3
Phys. Educ. 150	1	Art 150—Art, Music, Dance	3
		Phys. Educ. elective	1

SOPHOMORE YEAR

Music 261A—Theory III	3	Music 261B—Theory IV	3
Music 210w—Woodwinds	2	Music 210b—Brass Instrum.	2
Music 320, 321, 326, or 327	1	Music 415, 416, 417, 435, 445, or 446	1
Phil. 150—Phil. Ideas	3	Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3
Bio. Sci. 153—Prin. of Biol. *or* Phys. Sci. 151	3	Engl. 250—Underst. Lit.	3
Psych. 150—Human Behavior	3	Govt. 150—Govt. & Am. Soc.	3
		Elective	1

JUNIOR YEAR

Music 370A—Hist. of Music	3	Music 370B—Hist. of Music	3
Music 360—Orches. & Arrang.	2	Music 381—Choral Conduct.	2
Music 340A—Funct. Piano	1	Music 340B—Funct. Piano	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 471—Sec. Educ.	5
Educ. 490—Audio-Vis.	2	Hist. 250—U. S. History	3
Educ. 413—Psych. & Soc.	5		
Elective	1		

SENIOR YEAR

Music 320, 321, 326, or 327	1	Music 415, 416, 417, 435, 445, or 446	1
Music 382—Instrumental Conduct.	2	Music 320, 321, 326, or 327	1
Gen. Educ. Soc. Sci. elective	3	Educ. 443YZ—Directed Teach.	6
H&S 350—Personal Health	2	Educ. 444YZ—Problems Sec.	3
Educ. 493MuA—Methods	2	Gen. Educ. elective	3
Gen. Educ. elective	3	Elective	2
Elective	3		

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* See "Note" on page 55.

SUGGESTED COURSE SEQUENCE FOR MUSIC MAJOR WITH SPECIAL SECONDARY CREDENTIAL

(Choral Focus)

FRESHMAN YEAR SAME AS FOR NONCREDENTIAL MAJOR

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
Music 260A—Theory III	3	Music 260B—Theory IV	3
Music 231B—Funct. Voice	2	Music 415, 417, 435, 445, or 446	1
Phil. 150—Phil. Ideas	3	Music 320, 321, 326, or 327	1
Bio. Sci. 153—Prin. of Bio. *or*		Bio. Sci. 154—Prin. of Bio. *or*	
Phys. Sci. 151	3	Phys. Sci. 152	3
Psych. 150—Human Behavior	3	Engl. 250—Underst. Lit.	3
Elective	1	Govt. 150—Govt. & Am. Soc.	3
		Elective	2

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Music 370A—Hist. of Music	3	Music 370B—Hist. of Music	3
Music 360—Orches. and Arrang.	2	Music 381—Choral Conduct.	2
Music 340A—Funct. Piano	1	Music 340B—Funct. Piano	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 471—Sec. Educ.	5
Educ. 490—Audio-Vis.	2	Hist. 250—U. S. History	3
Educ. 413—Psych. & Soc.	5		
Elective	1		

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Music 382—Instrumental Cond.	2	Music 415, 416, 417, 435, 445, or 446	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Gen. Educ. Soc. Sci. elective	3	Gen. Educ. elective	3
H&S 350—Personal Health	2	Educ. 443YZ—Directed Teach.	6
Gen. Educ. elective	3	Educ. 444YZ—Problems Second.	3
Music 405, 406, or 465	2	Elective	2
Educ. 493MuB—Methods	2		
Elective	1		

SUGGESTED COURSE SEQUENCE FOR MUSIC MAJOR WITH GENERAL SECONDARY CREDENTIAL

(Instrumental Focus)

FRESHMAN YEAR AND SOPHOMORE YEAR SAME AS FOR SPECIAL SECONDARY—INSTRUMENTAL FOCUS

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Music 370A—Hist. of Music	3	Music 370B—Hist. of Music	3
Music 360—Orches. and Arrang.	2	Music 381—Choral Conduct.	2
Music 340A—Funct. Piano	1	Music 340B—Funct. Piano	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 471—Sec. Educ.	5
Educ. 413—Psych. & Soc.	5	Hist. 250—U. S. History	3
Minor	3		

SENIOR YEAR

First Semester	*Units*	*Second semester*	*Units*
Music 382—Instrumental Cond.	2	Music 415, 416, 417, 435, 445, or 446	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Gen. Educ. Soc. Sci. elective	3	Gen. Educ. elective	3
H&S 350—Personal Health	2	Educ. 493MuA—Methods (Major)	2
Gen. Educ. elective	3	Educ. 493—Methods (Minor)	2
Minor	5	Minor	7

GRADUATE YEAR

Educ. 442Y—Directed Teach.	3	Educ. 442Z—Directed Teach.	3
Educ. 444Y—Problems Secon.	1	Educ. 444Z—Problems Secon.	2
Educ. 490—Audio-Vis.	2	Educ. 480—Counsel and Guid.	2
Minor	6	Minor	2
Electives	4	Electives	7

SUGGESTED COURSE SEQUENCE FOR MUSIC MAJOR WITH GENERAL SECONDARY CREDENTIAL

(Choral Focus)

FRESHMAN, SOPHOMORE, AND JUNIOR YEARS SAME AS FOR INSTRUMENTAL FOCUS

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Music 382—Instrumental Cond.	2	Music 415, 416, 417, 435, 445, or 446	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Music 405, 406, or 465	2	Gen. Educ. elective	3
Soc. Sci. elective	3	Educ. 493MuB—Methods (Major)	2
H&S 350—Personal Health	2	Educ. 493—Methods (Minor)	2
Gen. Educ. elective	3	Minor	7
Minor	3		

GRADUATE YEAR

Educ. 442Y—Directed Teach.	3	Educ. 442Z—Directed Teach.	3
Educ. 444Y—Problems Secon.	1	Educ. 444Z—Problems Secon.	2
Educ. 490—Audio-Vis.	2	Educ. 480—Counsel and Guid.	2
Minor	6	Minor	2
Electives	4	Electives	7

General Secondary Teaching Minor

See also pages 140-141 for professional education requirements. A teaching major in a different teaching field is also required for the general secondary credential.

The music minor program prepares the student for teaching general music only: therefore, the only methods course which will satisfy the requirements will be Ed 493MuC, Methods of Teaching Elmentary Music.

General Requirements:

1. Prior to admission to this minor program each student must make an appointment with the Music Department for a performance audition and interview. These appointments may be made through the Music Department Office, Music Building, Room 145.

2. Each student must perform satisfactorily in at least two public student recitals before seeking the Department's endorsement for directed teaching.
3. Certain of the stated requirements involving performance competencies such as piano, voice, and the instruments may be waived by examination and other music units substituted.

Lower Division

Music 160AB–Theory I and II and Piano Laboratory	8 units
Select from the following	2 units
Music 230AB–Elementary Voice Instruction (1-1)	
Music 231AB–Functional Voice for Music Majors (2-2)	
Select from the following	2 units
Music 110sp, bw (2-2)	
Music 210 s,b,w,p (2-2-2-2)	

Upper Division

Music 371–Music Appreciation	3 units
Music 381–Choral Conducting	2 units
Music 340AB–Functional Piano	2 units
Select from the following	1 unit
Music 415 S-Z–Advanced Strings (1-1-1-1-1-1-1-1)	
Music 416 S-Z–Advanced Woodwinds (1-1-1-1-1-1-1-1)	
Music 417 S-Z–Advanced Brass (1-1-1-1-1-1-1-1)	
Music 418 S-Z–Advanced Percussion (1-1-1-1-1-1-1-1)	
Music 435 S-Z–Advanced Voice (1-1-1-1-1-1-1-1)	
Music 445 S-Z–Advanced Piano (1-1-1-1-1-1-1-1)	
Music 446 S-Z–Advanced Organ (1-1-1-1-1-1-1-1)	
Select from the following	2 units
Music 320 S-Z–Band (1-1-1-1-1-1-1-1)	
Music 321 S-Z–Orchestra (1-1-1-1-1-1-1-1)	
Music 326 S-Z–A Capella Choir (1-1-1-1-1-1-1-1)	
Music 327 S-Z–Chorus (1-1-1-1-1-1-1-1)	
	22 units

MASTER OF ARTS DEGREE

Two graduate curricula in Music are available to the student. Each leads to the Master of Arts degree and builds upon the undergraduate major. One course is designed for those students seeking a concentration in music and the other focuses upon music education.

Concentration in Music

Prerequisites:

A. A baccalaureate degree with a major in music.
B. Ability to perform acceptably as an instrumentalist on a standard orchestral instrument, piano, organ, or as a vocalist; and as a conductor.

Area of Specialization:

Music 599A–Introduction to Graduate Project	1 unit
Select from the following	3 units
Music 561–Seminar in Composition (3)	
Music 570–Seminar in Musicology (3)	

Music 464—Contemporary Techniques	3 units
Select from the following	6 units
Music 472—History and Literature of Instrumental Music (3)	
Music 477—History and Literature of Vocal Music (3)	
Music 478—History and Literature of American Music (3)	
Music 571—Music of the Baroque Period (3)	
Music 572—Music of the Classic Period (3)	
Music 573—Music of the Romantic Period (3)	
Select from the following	1 unit [1]
Music 520—Choral Techniques (1)	
Music 526—Instrumental Techniques (1)	
Select from the following	2 units [2]
Music 519 W-Z—Individual Instruction on Instruments (1-1-1-1)	
Music 539 W-Z—Individual Instruction in Voice (1-1-1-1)	
Music 549 W-Z—Individual Instruction on Piano or Organ (1-1-1-1)	
Music Electives	3 units [3]
Music 599B—Graduate Project	2 units [4]
Outside the Field of Music	6 units
Electives (selected from fields related to the degree program with adviser's approval)	3 units
	30 units

NOTE: Twelve (12) of the 21 units specified in music must be at the 500 level.

Concentration in Music Education

Prerequisites:

A. A baccalaureate degree with a major in music.

B. The completion of the instrumental, vocal and piano requirements for the special secondary credential.

C. Ability to perform acceptably as an instrumentalist on a standard orchestral instrument, piano, organ or as a vocalist; and as a conductor.

D. A course in elementary music methods or equivalent experience.

Area of Specialization:

Music 599A—Introduction to Graduate Project	1 unit
Select from the following	3 units
Music 500—Seminar in Elementary Music Education (3)	
Music 503A—Seminar in Choral Music Education (3)	
Music 504A—Seminar in Instrumental Music Education (3)	
Music 464—Contemporary Techniques	3 units
Select from the following	3 units
Music 472—History and Literature of Instrumental Music (3)	
Music 477—History and Literature of Vocal Music (3)	
Music 478—History and Literature of American Music (3)	
Music 571—Music of the Baroque Period (3)	
Music 572—Music of the Classic Period (3)	
Music 573—Music of the Romantic Period (3)	

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[1] Participation in performance organizations, plus one additional hour of seminar devoted to critiques and collegium. One unit is required; *up to two additional units may be elected.*

[2] A prescribed standard of skill in major performance area must be demonstrated as a prerequisite. Graduate credit for Advanced Performance allowed only in the major performance area. The requirement for Advanced Performance may be waived by examination in special cases.

[3] A total of four (4) elective units in performance may be applied toward the degree. Of these 4 a maximum of 2 *may* be in minor performance areas. (400 level.)

[4] Students electing to give a graduate recital as a project may be required to enroll for additional instruction in Advanced Performance.

Select from the following	2 units
Music 581—Advanced Choral Conducting (2)	
Music 582—Advanced Instrumental Conducting (2)	
Select from the following	1 unit[1]
Music 520—Choral Techniques (1)	
Music 526—Instrumental Techniques (1)	
Select from the following	1 unit[2]
Music 519 W-Z—Individual Instruction on Instruments (1-1-1-1)	
Music 539 W-Z—Individual Instruction in Voice (1-1-1-1)	
Music 549 W-Z—Individual Instruction on Piano or Organ (1-1-1-1)	
Music Electives	4 units[3]
Music 599B—Graduate Project	2 units[4]
Outside the Field of Music	6 units
Electives (selected from fields related to the degree program with adviser's approval)	4 units
	30 units

NOTE: At least two years of teaching must be completed before the degree may be conferred upon the candidate.
Twelve (12) of the 20 units specified in music must be at the 500 level.

COURSES OF INSTRUCTION

110 Orchestral Instruments (2) Fall, Spring

Class instruction in performance upon instruments of the orchestra. Minimum performance competency expected on at least one instrument of each family. Ensemble playing experience provided in the practice orchestra or band. Limited to those students seeking only the A.B. degree, the A.B. degree and special secondary credential with choral focus, or the music minor.

110 **Orchestral Instruments, String and Percussion**
110 **Orchestral Instruments, Brass and Woodwind**

160A-B Theory I and II and Piano Laboratory (4-4) Fall, Spring

Prerequisite: Knowledge of the fundamentals of music: pitch names, simple rhythms, etc., and some keyboard skill. Integrated approach to music theory; includes work in sightsinging, rhythmic problems, and essentials of harmony, counterpoint and form. Keyboard experience is emphasized.

210 Orchestral Instruments (2) Fall, Spring

Class instruction in orchestral instruments. Knowledge of basic playing techniques and fingering on all instruments. Participation in beginning band or orchestra.

210 **Orchestral Instruments, String**
210 **Orchestral Instruments, Brass**
210 **Orchestral Instruments, Woodwind**
210 **Orchestral Instruments, Percussion**

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[1] Participation in performance organizations, plus one additional hour of seminar devoted to critiques. *No more than two additional units may be elected.*

[2] A prescrbed standard of skill in major performance area must be demonstrated as prerequisite. Graduate credit for Advanced Performance allowed only in major performance area. The requirement in Advanced Performance may be waived by examination in special cases.

[3] A total of four (4) elective units in performance may be applied toward the M.A. Degree. Of these 4 a maximum of two (2) *may* be in minor performance areas. (400 level.)

[4] Students electing to give a graduate recital as a project may be required to enroll for additional instruction in Advanced Performance.

230A-B Elementary Voice Instruction (1-1)
For nonmusic majors and minors only. Technique of voice production; study of song interpretation; emphasis upon recreational singing; some attention given to elementary musicianship; remedial problems.

231A-B Functional Voice for Music Majors (2-2)
Limited to music majors and minors only. Development of vocal instrument; problems of vocal line, parlance, attack, release, tone color. Study of appropriate vocal literature; laboratory period correlated with choral methods.

240A-B-C Class Piano Instruction (1-1-1)
Students majoring in music receive no credit towards their major for this class. Development of music reading skills, playing by ear, and transposing; emphasis on appropriate music for recreational uses in the home, church, and community.

245A-B-C Organ Instruction (1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Class instruction in the technique and repertoire of organ playing.

260A-B Theory III and IV and Solo Performance Laboratory (3-3) Fall, Spring
Prerequisite: Music 160A-B. Continued study of materials of musical composition using more complex forms and more difficult techniques and styles. Writing emphasis will be on the student's major performing medium, and will include some ensemble playing of his own compositions.

263 Counterpoint (2) Fall, Spring
Study of eighteenth century contrapuntal techniques, including some work in the species; invertible counterpoint; motive development; two- and three-part inventions. Introduction to linear counterpoint.

300A-B Music for Children (2-2) Fall, Spring
Methods of teaching music in the elementary schools: rhythmic activities, use of simple instruments, music reading, singing, creative, and listening experiences. Basic methods course for general elementary and kindergarten-primary credentials.

320S-Z Band (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor.

321S-Z Orchestra (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor.

325S-Z Men's Glee Club (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Designed for nonmusic majors

326S-Z A Cappella Choir (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor.

327S-Z Chorus (1-1-1-1-1-1-1-1) Fall, Spring

Open to all students who can carry a tune. Preparation and performance of standard choral literature, including cantatas, oratorios, and operatic choruses.

340A-B Functional Piano for Music Majors (1-1) Fall, Spring

Prerequisite: Audition by faculty members. Development of the keyboard facility demanded by the public schools and the music profession; emphasis on sight reading, transposition, playing by ear, choral score reading, reduced instrumental score reading, improvisation, directing from the piano, playing patriotic numbers in appropriate keys, artistic accompanying, and memorization and artistic performance of music of medium difficulty.

360 Orchestration and Arranging (2) Fall, Spring

Prerequisite: One year of theory or equivalent. It is recommended that Music 210 or 110 be completed prior to this course. Theory and practice of writing for instrumental ensembles. Study of orchestral score and an introduction to symphonic orchestration.

370A-B History of Music in Western Civilization (3-3) Fall, Spring

Prerequisite: One year of music theory or equivalent. Survey of music in general culture; stylistic development of music shown by playing and discussing typical literature. First semester emphasizes the Medieval through Baroque periods; second semester, the Preclassical to the present.

371 Music Appreciation (3) Fall, Spring

Development of understanding and enjoyment of music through study of its fundamentals, history, and literature. Emphasis on awareness and evaluation of music in our lives. Required attendance at selected concerts. For nonmusic majors only.

381 Choral Conducting (2) Fall, Spring

Prerequisite: Two years harmony, solfege, or their equivalent. Principles of choral conducting; problems of choral organization.

382 Instrumental Conducting (2) Fall, Spring

Prerequisite: Music 381. It is recommended that Music 210, or Music 110, be completed prior to this course. Experience offered in transposition, score reading, baton technique, and interpretation of symphonic literature. Recognition of psychologically sound rehearsal procedure. Experience conducting rehearsal orchestra is an integral part of the course.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

400 Practicum in Elementary Music Education (2) Spring
Prerequisite: Music 300AB, or Education 493MuC, or experience teaching special music in the elementary schools. Survey and evaluation of literature for the elementary classroom; devising means for causing music to become a living force in the lives of children.

401 Psychology of Music (2) Spring
Prerequisite: Survey of psychology, educational psychology, and at least 20 units of music. Study of musical personality, perception of music's characteristics, musical taste, and theories of learning applied to musical learning. Survey of standardized tests of musical aptitude, musical achievement, and musical taste. Two-hour lecture.

402 Psychoacoustics of Music (2) Fall 1961
Prerequisite: Music 401. Study of how architectural design, musical instrument construction, electronic recording and reproduction systems, and physiological characteristics of the human ear influence the perception of music's dimensions.

405 Piano Methods and Materials (2) Fall
Practical procedures for teaching piano, from preschool child to adult level. Methods and materials for public school class and private teaching.

406 Training in Vocal Techniques (2) Spring
Prerequisite: Consent of instructor. Class instruction in methods and materials for teaching voice. Comparative analyses of methods for the child voice, the changing voice, and the mature voice.

410 Orchestral Instruments (2) Fall, Spring
Prerequisite: Music 210 or equivalent. Additional experience playing orchestral instruments. Concentration on instruments other than those played in Music 210.

410 **Orchestral Instruments, String**
410 **Orchestral Instruments, Brass**
410 **Orchestral Instruments, Woodwind**

415S-Z Advanced Strings (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Class instruction in technique and repertoire for advanced students of violin, viola, cello, and bass.

416S-Z Advanced Woodwinds (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Class instruction in technique and repertoire for advanced students of woodwind instruments.

417S-Z Advanced Brass (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Class instruction in technique and repertoire for advanced students of brass instruments.

418S-Z Advanced Percussion (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Class instruction in techniques and repertoire for advanced students of percussion instruments.

420S-Z Brass Ensemble (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. For advanced students. Rehearsal and performance of standard brass ensemble literature, including brass choir, sextets, quintets, and quartets.

421S-Z Woodwind Ensemble (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. For advanced students. Rehearsal and performance of standard woodwind ensemble literature, including woodwind choir, sextets, quintets, and quartets.

422S-Z String Ensemble (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. For advanced students. Rehearsal and performance of standard chamber music for strings alone and strings with piano.

425S-Z Madrigal Singers (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor.

426S-Z Opera Workshop (1-1-1-1-1-1-1-1) Fall, Spring
Problems of opera production; presentation of typical operatic ensembles and scenes. Open to qualified singers.

430A-B Intermediate Voice (1-1) Fall, Spring
Prerequisite: Previous voice instruction or consent of instructor. Continued development of vocal skills. Greater emphasis on development of repertoire.

435S-Z Advanced Voice (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Performance of art song, opera, and oratorio literature. Advanced techniques. Primarily for the voice major.

441A-B-C Intermediate Piano (1-1-1) Fall, Spring
Prerequisite: Music 240C or equivalent. Technical study and performance of some of the smaller compositions in the standard piano literature.

445S-Z Advanced Piano (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Advanced repertory and interpretive coaching for public performance, with consideration of materials selected from the different periods of musical composition.

446S-Z Advanced Organ Instruction (1-1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Advanced repertory and interpretive coaching for public performance.

447W-X-Y-Z Accompanying (1-1) Fall, Spring
Prerequisite: Audition by instructor. Discussion and demonstration of particular problems of ensemble performance involving singers or instrumentalists and pianists; specific skills needed by an accompanist and coach; performance practice of vocal (concert and operatic repertoire)

and instrumental music of the different style periods; playing for individuals or groups; treatment of recitatives; problems of transposing; practical experience and guidance by performance in class and recital.

460 Orchestration and Arranging (2) Spring
Prerequisite: Music 360. Survey of techniques necessary for orchestrating compositions for a symphonic band and symphonic orchestra; special attention given to problems encountered in public school bands and orchestras.

461 Musical Form (2) Fall
Prerequisite: One year of harmony and musicianship. Analytic techniques for the study of balance in the organization of musical material.

463 Intermediate Composition (2) Fall
Prerequisites: Music 260B, Music 360. Writing for small ensembles such as string quartet, woodwind quartet or quintet, or small vocal groups with and without instruments.

464 Contemporary Techniques (3) Spring
Study of the techniques used in contemporary composition and application to practical writing.

465 Vocal Arranging (2) Spring
Study of writing and arranging for vocal groups; problems in arranging for the usual school groups; girls' and boys' chorus and mixed chorus; creative arranging in the smaller vocal forms, with and without instrumental accompaniment.

472 History and Literature of Instrumental Music (3)
Spring, 1961
Prerequisite: Music 370B. Study of instrumental music from the Baroque Period to the present; analysis and performance of representative works from the fields of orchestral, chamber, or keyboard literature.

477 History and Literature of Vocal Music (3) Fall, 1960
Prerequisite: Music 370B. Study of vocal literature from the Baroque Period to the present; analysis and performance of representative works from the field of opera, the large choral forms, and the art song.

478 The History and Literature of American Music (3)
Spring, 1961
Prerequisite: Senior or graduate academic standing. Historical survey of music in the United States from early colonial times to the present. Emphasis on musical literature and the developments in composition, performance, music education, and instrument manufacture.

500 Seminar in Elementary Music Education (3) Fall

Prerequisite: Baccalaureate degree with a major in music education and at least one year of teaching experience. Study of the basic concepts in music education, their development, and their application to the musical activities in the elementary school.

503A-B Seminar in Choral Music Education (3-3) A–Fall; B–Spring

Prerequisite: Education 493MuB or equivalent. Experience in teaching and/or conducting choral organizations. Study of basic concepts in music education, their development, and application to choral music. Advanced course in the survey and interpretation of chorus and vocal ensemble music suitable for public schools. Music selected will be performed and analyzed for aesthetic and educational values and interpretation.

504A-B Seminar in Instrumental Music Education (3-3) A–Spring; B–Fall

Prerequisite: Education 493MuA or equivalent. Study of the basic concepts in music education, their development, and application to instrumental music. Survey and the development of criteria for the selection and interpretation of solo, ensemble, and large group instrumental music literature.

506 School Music Administration and Supervision (3) Spring

Prerequisite: Graduate standing. Study of administrative and supervisory responsibilities of the music educator. Leadership in the areas of personal relations; curriculum; improving instruction; public relations; scheduling; budget and finance; equipment, materials and supplies; and space and housing.

519W-X-Y-Z (216A-B-C-D) Individual Lessons on Instruments (1-1-1-1) Fall, Spring

On-campus, private lessons with approved instructors. Special fee.

520X-Y-Z Choral Techniques (1-1-1) Fall

Prerequisite: Graduate standing and prior experience in teaching and/or conducting musical groups. Participation in a choral organization, with one additional hour of seminar devoted primarily to a collegium in the study and reading of less well-known music literature. Analysis of literature and rehearsal techniques; study of special choral problems.

526X-Y-Z Instrumental Techniques (1-1-1) Spring

Prerequisite: Graduate standing and prior experience in teaching and/or conducting musical groups. Participation in an instrumental organization, with one additional hour of seminar devoted primarily to a collegium in the study and reading of less well-known music literature. Analysis of literature and rehearsal techniques; study of special instrumental problems.

539W-X-Y-Z Individual Lessons in Voice (1-1-1-1) Fall, Spring
On-campus, private lessons with approved instructors. Special fee.

549W-X-Y-Z Individual Lessons on Piano or Organ (1-1-1-1) Fall, Spring
On-campus, private lessons with approved instructors. Special fee.

560 Creative Arranging (2) Spring, 1960
Prerequisites: Music 360 and 460 or equivalent. Specialized work in arranging for ensembles including the symphonic band and standard symphony orchestra.

561 Seminar in Composition (3) Fall
Prerequisite: Graduate standing in music and consent of instructor. Clarification of the philosophies and aesthetic theories involved in contemporary music; compositional problems and projects of an advanced nature intended to synthetize previous creative skills and techniques.

563 Advanced Composition and Analysis (2) Fall, 1959
Prerequisite: Music 463 or equivalent. Free composition in all the vocal and instrumental forms.

570 Seminar in Musicology (3) Spring
Prerequisite: Graduate standing as a music major or equivalent musical background. Discussion of specific musicological problems in the wake of reports or papers prepared by individual students.

571 Music of the Baroque Period (3) Fall, 1960
Prerequisite: Graduate standing as a music major or equivalent musical background. Discussion of the stylistic characteristics of the music of the Baroque Period and formal, technical, and thematic score analysis of representative works played from recordings or in live performance.

572 Music of the Classic Period (3) Fall, 1961
Prerequisite: Graduate standing as a music major or equivalent musical background. Discussion of the stylistic characteristics of the music of the Classic Period and formal, technical, and thematic score analysis of representative works played from recordings or in live performance.

573 Music of the Romantic Period (3) Spring, 1962
Prerequisite: Graduate standing as a music major or equivalent musical background. Discussion of the stylistic characteristics of the music of the Romantic Period and formal, technical, and thematic score analysis of representative works played from records or in live performance.

581 Advanced Choral Conducting (2) Spring
Prerequisites: Music 381 and Music 382.

582 Advanced Instrumental Conducting (2) Fall
Prerequisites: Music 381 and Music 382.

599A-B Graduate Project (1-2) Fall, Spring
Prerequisite: Graduate standing. 599A must be taken the first semester of the student's graduate year. Diagnostic tests will be given for the purpose of program advisement. Study of basic bibliography, survey of literature, methods of research in music and music education, and practice in organizing and reporting data both oral and written. A tentative proposal for the graduate project will be developed. 599B must be taken in the final semester of the student's program. The project will be completed under the guidance of an advisory committee.

NURSING

(In the Division of Technical Sciences)

STAFF: Malkin (Department Head), Aiello, Greiner, Blackwell, Mote, Wendtland.

The Department of Nursing offers two programs designed to meet increasing needs for the services of professional nurses in hospitals, public health agencies, homes, school systems, and industries: (1) Basic program for students in nursing, and (2) supplementary program for Registered Nurses.

Students planning to enter either program *must be advised by the faculty of the Department of Nursing*. Students wishing to enroll in a clinical laboratory course must register with the Department of Nursing by the middle of the preceding semester. (Deadlines are June 15th for the fall semester and November 15th for the spring semester.)

BACHELOR'S DEGREE CURRICULA

Basic Program for Major in Nursing

This program leading to the bachelor of science degree with a major in nursing has been approved by the California State Board of Nurse Examiners. It is designed to prepare high school graduates for professional nursing services in hospitals, public health agencies, homes, school systems, and industries. Students will complete Education 300 which includes a special health examination before enrolling in courses in nursing. All nursing students are required to carry Students' Accident and Sickness Medical Expense Insurance available through the college.

Lower Division

Anatomy 201—Structure of the Human Body	3 units
Physiology 201—Introduction to Human Physiology	3 units
Microbiology 200—General Microbiology	5 units
Chemistry 100AB—Fundamentals of Chemistry	6 units
Nursing 201—Fundamentals of Nursing	4 units
Nursing 219—Medical-Surgical Nursing I *or* Nursing 220—Maternal-Child Health I	7 units
Home. Econ. 210—Food Preparation and Nutrition	4 units

Upper Division

Education 413—Psychological and Sociological Foundations of Education	5 units
Public Health 313—Public Health Administration	3 units
Nursing 219—Medical-Surgical Nursing I *or* Nursing 220—Maternal-Child Health I	7 units
Nursing 315—Psychiatric Nursing II	8 units
Nursing 302—Survey of Nursing	3 units
Nursing 306—Community Health Nursing	8 units
Nursing 303—Behavioral Patterns in Illness	2 units
Nursing 319—Medical-Surgical Nursing II *or* Nursing 320—Maternal-Child Health II	6 units

Summer Session of Senior Year

Nursing 319—Medical Surgical Nursing II *or* Nursing 320—Maternal-Child Health II	6 units
	80 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR NURSING MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	Physio. 201—Physiology	3
Phys. Sci. 151	3	H. Econ. 210—Nutrition	4
Psych. 150—Human Behavior	3	Chem. 100A—Fundament. of Chem.	3
Anat. 201—Anatomy	3	Anthro. 250—Cult. Anthro.	3
Soc. 250—Man & Society	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Phys. Educ. 150	1		

SOPHOMORE YEAR

Physical Educ. Elective	1	Nursing 219—Med.-Surg. Nurs. I *or* Nursing 220—Matern.-Child Health I	7
Nursing 201—Fundamentals	4	Art 150—Art, Music, Dance	3
Chem. 100B—Fundament. of Chem.	3	Engl. 250—Underst. Lit.	3
Micro. 200—Gen. Micro.	5	Govt. 150—Govt. & Am. Soc.	3
Nursing 303—Beh. Patterns	2		

JUNIOR YEAR

Nursing 220—Mat.-Chld. Heal. I *or* Nursing 219—Med.-Surg. Nurs. I	7	Nursing 315—Psych. Nurs. II	8
Phil. 150—Phil. Ideas	3	Publ. Hlth. 313—Publ. Hlth. Adm.	3
Educ. 413—Psych. & Soc.	5	Hist. 250—U. S. History	3
		Elective	2

SENIOR YEAR

Nursing 306—Prin. of Nurs. in Commun.	8	Nursing 319—Med.-Surg. Nurs. II *or* Nursing 320—Mat.-Chld. Hlth. II	6
Electives	5	Nursing 302—Survey of Nurs.	3
Genl. Educ. elective	3	Electives	7

SUMMER SESSION—SENIOR YEAR

Nursing 320—Mat.-Chld. Hlth. II *or* Nursing 319—Med.-Surg. Nurs. II	6

Supplementary Program for Registered Nurses

The curriculum in nursing, leading to the bachelor of science degree with a major in nursing, is designed to supplement the preparation of the registered nurse (graduate of a hospital training program) for professional nursing services in hospitals, public health agencies, homes, school systems, and industries. Students planning to enter the program must be advised by the faculty of the Department of Nursing. Applications for entering the clinical laboratory courses of nursing major must be on file June 15th for the fall semester and by November 15th for the spring semester.

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* See "Note" on page 55.

A total of 132 units must be completed to qualify for graduation with a bachelor's degree in nursing. A nurse who has graduated from an accredited school of nursing and is registered in the State of California may be granted 33-36 units toward the baccalaureate degree. A summary of the requirements follows:

1. Credit for R.N. in nursing granted by an accredited school of nursing (including Psychiatric Nursing)[*] .... 36 units
2. Required General Education .... 45 units
3. Required in Nursing at Los Angeles State College .... 21 units
   - Nursing 302—Survey of Nursing (3)
   - Nursing 303—Behavioral Patterns in Illness and Health (2)
   - Nursing 304—Effective Relationships in Nursing (2)
   - Nursing 306—Principles and Practices of Nursing in the Community (8)

   One of the following clinical courses:
     - Nursing 305—Psychiatric Nursing II (6)
     - Nursing 309—Medical-Surgical Nursing II (6)
     - Nursing 310—Nursing in Maternal-Child Health II (6)
4. Required Related Subjects .... 13 units
   - Education 413—Psychological and Sociological Foundations of Education (5)
   - Education 493N—Methods of Teaching in Nursing (2)
   - Public Health 313—Public Health Administration (3)
   - Sociology 440—Marriage and the Family (3)
5. Electives[†] .... 17 units

132 units

Health and Development Credential for the School Nurse [‡]

Students must complete 36 units of required courses as a part of the qualifications for the health and development credential. Students interested in obtaining this credential should seek early advisement from the Department of Nursing.

COURSES OF INSTRUCTION

Students must register with adviser for all clinical courses by the middle of the semester prior to registration.

101 Home Nursing (2) Spring

Designed for Home Economics majors to provide theory and laboratory practice in the home care of the sick and injured. Lecture 1 hour; laboratory 3 hours per week.

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[*] Students who have not successfully completed a clinical laboratory experience in psychiatric nursing in a setting specifically designed for psychiatric care will be granted 33 units and will be required to take Nursing 205—Psychiatric Nursing I (3). Final evaluation of unit value for previous psychiatric nursing experience will be determined by the faculty of the Department of Nursing.

[†] Student applying for Health and Development Credential will take courses totaling six units more, leaving 10 units of electives.

[‡] Students should apply directly to State Department of Education for evaluation of education preparation and issuance of credential.

201 Fundamentals of Nursing (4) 1960-61
Prerequisites: Consent of instructor.
Beginning course to develop skills in nurse-patient relationships, and physical nursing care of hospitalized patients. Lecture two hours; laboratory six hours.

205 Psychiatric Nursing I (3) Fall
Prerequisites: Consent of instructor.
Provides opportunity for the registered nurse to develop skill in the application of current accepted theories in psychiatric nursing; exploration and study of community resources available for the treatment of emotional disorders. Lecture 1 hour; laboratory 6 hours per week.

219 Medical-Surgical Nursing I (7) 1961-62
Prerequisites: Consent of instructor.
Develops ability to provide comprehensive nursing care to medical-surgical patients. Lecture 2 hours; laboratory 15 hours.

220 Maternal-Child Health I (7) 1961-62
Prerequisites: Consent of instructor.
Beginning course in maternal and child care with emphasis on the nurse's role in the satisfaction of the health needs of the parents and new baby. Lecture 2 hours; laboratory 15 hours.

302 Survey of Nursing (3) Fall, Spring
Critical analysis of studies in nursing and their relationship to the development of the profession.

303 Behavioral Patterns in Illness and Health (2) Fall
Provides an understanding of human behavior in the hospital setting; emphasis on the interrelatedness of physical, emotional, and social health.

304 Effective Relationships in Nursing (2) Spring
Prerequisite: Nursing 303.
Professional relationships in nursing, including patient-nurse, family-nurse, medical and nursing team relationships, interdepartmental relationships.

305 Psychiatric Nursing II (6) Spring
Prerequisites: Preregistration and consent of instructor. Second level clinical course designed for the registered nurse. Includes study of needs and treatment of psychiatric patients. Lecture 2 hours; clinical laboratory 12 hours.

306 Principles and Practices of Nursing in the Community (8) Fall, Spring
Prerequisites: Preregistration and consent of instructor. Provides the nursing student with theory and concurrent laboratory experience in schools, industry, and community health agencies; emphasis on philosophy of positive health, and skills in preventive and promotional procedures. Lecture 4 hours; laboratory 12 hours.

309 Medical-Surgical Nursing II (6) Fall
Prerequisite: Consent of instructor. A second level clinical course designed for the experienced registered nurse; health teaching; rehabilitation objectives; practices which prevent disabling effects of illness; skill in making nursing diagnosis. Lecture 3 hours; laboratory 9 hours.

310 Maternal and Child Health II (6) Spring
Prerequisites: Preregistration and consent of instructor. Laboratory experience designed for the registered nurse in hospitals, out-patient departments, health departments, clinics, nursery and public schools, day care centers. Lecture 2 hours; clinical laboratory 12 hours.

314 Principles and Practices of Public School Nursing (4) Fall, Spring
Prerequisite: Consent of instructor.
Practical application of basic principles, functions, techniques, and methods of public school nursing in California. Lecture 3 hours; laboratory to be arranged: 5 consecutive days for nurses not currently employed in School Nursing; others—special project.

315 Psychiatric Nursing II (8) 1962-63
Clinical course for the student in Basic Nursing Program. Develops skills in the application of current accepted theories in psychiatric nursing; community resources available; study of needs and treatment of psychiatric patient and family. Lecture 3 hours; laboratory 15 hours.

319 Medical-Surgical Nursing II (6) 1962-63
Prerequisite: Consent of instructor.
Second level clinical course for students in Basic Nursing Program. Provides experience in administering care to neuro-surgical patients and patients undergoing radical surgery. Beginning experience in unit management. Lecture 2 hours; laboratory 12 hours.

320 Maternal-Child Health II (6) 1962-63
Prerequisite: Consent of instructor.
Second level clinical course for students in the Basic Nursing Program. Includes care of sick, hospitalized child; general ward functions of registered nurse such as supervising nurses' aides, and experience in clinics, nursery, and public schools. Lecture 3 hours; laboratory 9 hours.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Consent of instructor.
Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

PHILOSOPHY

(In the Division of Social Sciences)

STAFF: Zimmerman (Department Head), Albert, Alexander, Mullins, Sayles, J. Wilson.

COURSES OF INSTRUCTION

150 Philosophical Ideas (3) (General Education)

Approach to an understanding of philosophy through examination of such basic concepts as freedom, truth, life, beauty, belief, and justice; reading significant philosophical and popular literature.

210 Types and Problems (3)

Basic types of philosophy, such as materialism, naturalism, idealism, pragmatism, and realism. Attention to certain major problems; space-time and relativity, relationship of science to philosophy, human freedom, nature of knowledge, ethics, aesthetics, belief in God, and implications of philosophy for contemporary social scene.

250 Logic (3) (General Education)

Analysis and criticism of inductive and deductive reasoning. Study of definition, verification, evidence, validity, truth, and fallacious argument in all areas of inquiry.

304 Ethics (3)

Historical and scientific backgrounds of morality. Theories of the highest good. Ethical ideals of some of the world's major religions. Problems of personal and social morality.

320 History of Ancient and Medieval Philosophy (3)

Development of philosophical thought from the Ancient Greek to the end of the Medieval period. Study of principal thinkers, major problems, and dominant trends in Western thought.

321 History of Modern Philosophy (3)

Development of philosophical thought from the medieval period to the present time. Study of principal thinkers, major problems and dominant trends in Western thought.

338 Comparative Religions (3)

Comparative study of the world's living religions: Buddhism, Confucianism, Judaism, Christianity, Islamism, and others. Concepts of deity, the immortality of the soul, methods of salvation, and the influence of environment and culture upon these beliefs.

430 American Philosophy (3)
Major movements of thought and principal thinkers in America from colonial times to the twentieth century. The relationships of American philosophy to European intellectual currents. The influence and bearings of dominant doctrines on American life and outlook.

440 Contemporary Philosophy (3)
Major problems and trends in Twentieth Century philosophy. Naturalism, idealism, logical positivism, neo-thomism, existentialism, communism, and modern scientific philosophies, with special attention to such influential philosophers as Whitehead, Russell, and Dewey.

460 Metaphysics (3)
Basic problems which emerge in a study of the ultimate nature of reality. Philosophers including A. N. Whitehead, Aristotle, Descartes, Wittgenstein, and others; consequences in the fields of education, science, ethical value, and political thought.

470 Theory of Knowledge (3)
Basic problems which emerge in a study of how man knows. Philosophical writings of Plato, Berkeley, Thomas Aquinas, Russell C. Pierce, Lovejoy, W. James, A. Eddington, and others; consequences in the fields of education, science, and political thought.

475 Aesthetics (3)
Main problems and principle theories of art creation, appreciation, and criticism. Aesthetic experience and the work of art; principles of aesthetic evaluation and their bearings on morality, government, society, science, and philosophy.

485 Philosophy of Science (3)
Prerequisite: General Education science requirements or consent of instructor. A study of philosophical issues in the physical, life, and social sciences. Problems selected for study may include: concept formation; hypotheses and models; meaning and verification; prediction; explanation; causality and natural law.

PHYSICAL EDUCATION

(In the Division of Health and Safety, Physical Education, Recreation, and Athletics)

STAFF: Wise (Department Head), Adams, Bell, Cake, Crakes, Deeds, Dunkelberg (Co-ordinator for men), Ellena, Elliot, Ennen, Faurot, Fisher, Gunnel, Hoyt, J. Johnson, W. Johnson, Jumonville, Lakie, Lamp, Mochel, Nilsen, O'Brien, Olsen, Outland, Reeder, Reeves, Tillman, Wroblicky, Yerrington (Co-ordinator for women).

BACHELOR'S DEGREE CURRICULA

Major in Physical Education

Ordinarily, physical education is offered as a teaching major. Students wishing to qualify for a bachelor's degree in this field should follow the requirements listed below for the special secondary teaching major.

Special Secondary Teaching Major

The major in physical education for a special secondary teaching credential is designed for those who expect to teach physical education in the public secondary schools. This credential authorizes the holder to teach physical education in elementary and secondary schools in California. This major might also be followed by students wishing to qualify for positions other than public school teaching.

Lower Division

Anatomy 201—Structure of the Human Body	3 units
Physiology 201—Introduction to Human Physiology	3 units
P.E. 180—Professional Activities I	2 units
P.E. 181—Professional Activities II	2 units
P.E. 280—Professional Activities III	2 units
P.E. 281—Professional Activities IV	2 units
P.E. 295—Water Safety	1 unit
H&S 201—First Aid	1 unit

Upper Division

P.E. 406—Methods of Teaching Individual Sports	2 units
P.E. 425—Principles of Physical Education	2 units
P.E. 431—Kinesiology	3 units
P.E. 432—Corrective Physical Education	2 units
P.E. 433—Physiology of Activity	3 units
P.E. 434—Prevention and Care of Athletic Injuries (required for men only)	2 units
P.E. 444—Organization and Administration of Physical Education and Athletics	2 units
H&S 460—School Health Education	3 units

Women select four to five courses from the following .... 8 units
Men select three to five courses from the following .... 6 units
  P.E. 401—Methods of Teaching Square and Round Dance (2)
  P.E. 402—Methods of Teaching Modern Dance (2)
  P.E. 403—Methods of Teaching Social Dance (2)
  P.E. 404fs—Methods of Teaching Team Sports for Women I (2)
  P.E. 404ss—Methods of Teaching Team Sports for Women II (2)
  P.E. 407—Methods of Coaching Football (2)
  P.E. 408—Methods of Coaching Basketball (2)
  P.E. 409—Methods of Coaching Tennis and Swimming (2)
  P.E. 410—Methods of Coaching Track and Field (2)
  P.E. 411—Methods of Coaching Baseball (2)
Physical Education 460—School Camping and Outdoor Education *or* Recreation Education course approved by adviser .... 2 units

43 units

Note: All transfer students who do not take Physical Education 180, 181, 280, and 281 are required to complete successfully the department skills test. This test must be completed prior to directed teaching in physical education.

SUGGESTED COURSE SEQUENCE FOR PHYSICAL EDUCATION MAJOR WITH SPECIAL SECONDARY CREDENTIAL

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Phys. Educ. 180—Prof. Act. I	2	P.E. 181—Prof. Act. II	2
Bio. Sci. 153—Prin. of Bio.	3	Bio. Sci. 154—Prin. of Bio. II *or* Phys. Sci. 152	3
Phys. Sci. 151—Prin. of Phys. Sci.	3	Govt. 150—Govt. and Am. Soc.	3
†Engl. 150—Written Expr. *or* Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Electives	5	Gen. Educ. Soc. Sci. elective	3
		Elective	2

SOPHOMORE YEAR

P.E. 280—Prof. Act. III	2	P.E. 281—Prof. Act. IV	2
Anat. 201—Struc. Human Body	3	Physio. 201—Intro. Human Physio.	3
P.E. 295—Water Safety	1	Engl. 250—Underst. Lit.	3
Hist. 250—U. S. History	3	Art 150—Art, Music, Dance	3
Phil. 150—Phil. Ideas	3	*Phil. 350—Logic	3
Psych. 150—Human Behavior	3	Elective	2

JUNIOR YEAR

P.E. 406—Methods of Teach. Indiv. Sports	2	P.E. 433—Physio. of Activity	3
P.E. 431—Kinesiology	3	P.E. 401, 402, 403, or 409—Methods Course (Women) *or* P.E. 401, 403, 409, 410, or 411—Methods Course (Men)	2
P.E. 425—Prin. of P.E.	2	Educ. 493—Methods	2
P.E. 401, 403, or 404—Methods Course (Women) *or* P.E. 401, 403, 407, or 408—Methods Course (Men)	2	Educ. 471—Sec. Educ.	5
Educ. 300—Intro. Cred. Prog.	N.Cr.	H&S 350—Personal Health	2
Educ. 413—Psych. and Soc.	5		
H&S 201—First Aid	1		

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* Or elective in General Education.
† See "Note" on page 55.

SENIOR YEAR

First Semester	*Units*	*Second semester*	*Units*
P.E. 432—Adapted P.E.	2	P.E. 444—Org. and Adm. of P.E.	2
P.E. 401, 403, or 404—Methods Course (Women) *or*		Educ. 443Z—Directed Teach.	3
P.E. 401, 403, 407, or 408—Methods Course (Men)	2	Educ. 444Z—Problems Sec.	2
Educ. 443Y—Direct. Teach.	3	Educ. 490—Audio-Vis.	2
Educ. 444Y—Problems Sec.	1	H&S 460—Sch. Health Educ.	3
Hist. 450—Senior Colloq.	3	P.E. 434—Prev. and Care of Ath. Inj. (Men only)	2
P.E. 418—Spts. Officiating for Women *or*		Electives (Men)	1
P.E. 417—Spts. Officiating for Men	2	Electives (Women)	3
P.E. 460—School Camping *or*			
Rec. Ed. course approved by adviser	2		

General Secondary Teaching Major

The general secondary credential is a five-year program requiring at least 30 units beyond the bachelor's degree. The department's requirements for the general secondary teaching credential with a major in physical education are the same as those for the special secondary credential. In addition, a teaching minor is required in another field.

SUGGESTED COURSE SEQUENCE FOR PHYSICAL EDUCATION MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
P.E. 180—Prof. Activities I	2	P.E. 181—Prof. Activities II	2
Bio. Sci. 153—Prin. of Bio. I	3	Bio. Sci. 154—Prin. of Biol. II	3
Phys. Sci. 151—Prin. of Phys. Sci. I	3	*Sp. 150—Oral Expr. *or*	
*Engl. 150—Writ. Expr. *or*		Lang. Arts 150B	3
Lang. Arts 150A	3	Minor	2
Elective	5	Govt. 150—Govt. and Am. Soc.	3
		Gen. Educ. Soc. Sci. Elective	3

SOPHOMORE YEAR

P.E. 280—Prof. Activities III	2	P.E. 281—Prof. Activities IV	2
Anat. 201—Struc. Human Body	3	Physio. 201—Intro. Human Physio.	3
P.E. 295—Water Safety	1	Engl. 250—Underst. Lit.	3
Hist. 250—U. S. History	3	Art 150—Art, Music, Dance	3
Phil. 150—Phil. Ideas	3	Phil. 350—Logic	3
Psych. 150—Human Behavior	3	Elective	2

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* See "Note" on page 55.

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
P.E. 406—Methods Ind. Sports	2	P.E. 433—Physio. of Activity	3
P.E. 431—Kinesiology	3	P.E. 401, 402, 403, or 409—Methods Course (Women) *or* P.E. 401, 403, 409, 410, or 411—Methods Course (Men)	2
P.E. 425—Prin. of Phys. Educ.	2	Educ. 471—Sec. Educ.	5
P.E. 401, 403, or 404—Methods Course (Women) *or* P.E. 401, 403, 407, or 408—Methods Course (Men)	2	H&S 350—Personal Health	2
Educ. 300—Intro. Cred. Program	N.cr.	Minor	4
Educ. 413—Psych. and Soc.	5		
H&S 201—First Aid	1		

SENIOR YEAR

P.E. 432—Adapted Phys. Educ.	2	P.E. 444—Organ. & Adm. Phys. Educ.	2
P.E. 401-403 or 404—Methods Course (Women) *or* P.E. 401, 403, 407 or 408 Methods Course (Men)	2	H&S 460—School Health Educ.	3
P.E. 418—Sports Officiating for Women *or* P.E. 417—Sports Officiating for Men	2	Ed. 442YZ—Dir. Teach.	3
Educ. 493—P.E.—Methods (Major)	2	Ed. 444YZ—Prob. in Sec. Teaching	1
Hist. 450—Senior Colloquium	3	Ed. 490—Audio-Visual Instruction	2
Minor	2	Ed. 493—Methods (Minor)	2
P.E. 460—School Camping *or* Rec. Ed. course approved by adviser	2	Elective	2

GRADUATE YEAR

Educ. 442YZ—Dir. Teach.	3	P.E. 501—Tests & Meas. Phys. Ed.	2
Educ. 444YZ—Prob. in Sec. Teaching	2	P.E. 522—Seminar	3
Minor	4	P.E. 599AB—Graduate Project	3
Educ. 480—Fund. Counsel. Guid.	2	Minor	4
P.E. 545—Program Planning in Physical Education	2	Elective	3
Elective	2		

General Secondary Teaching Minor

The teaching minor in physical education is designed for students who plan to teach in the secondary schools with a general secondary credential. A teaching major and a graduate year including additional professional education are required for this credential.

Lower Division

P.E. 180—Professional Activities I	2 units
P.E. 181—Professional Activities II	2 units
P.E. 280—Professional Activities III	2 units
P.E. 281—Professional Activities IV	2 units
Anatomy 201—Struc. Human Body *or* Physio. 201—Intro. Human Physio.	3 units

Upper Division

Select at least *one* course from the following 2 units
- P.E. 401–Methods of Teaching Square and Round Dance (2)
- P.E. 402–Methods of Teaching Modern Dance (2)
- P.E. 403–Methods of Teaching Social Dance (2)
- P.E. 404fs–Methods of Teaching Team Sports for Women I (2)
- P.E. 404ss–Methods of Teaching Team Sports for Women II (2)
- P.E. 407–Methods of Coaching Football (2)
- P.E. 408–Methods of Coaching Basketball (2)
- P.E. 409–Methods of Coaching Tennis and Swimming (2)
- P.E. 410–Methods of Coaching Track and Field (2)
- P.E. 411–Methods of Coaching Baseball (2)

Select at least *one* course from the following: 2–3 units
- P.E. 431–Kinesiology (2)
- P.E. 432–Corrective Physical Education (2)
- P.E. 433–Physiology of Activity (3)
- P.E. 434–Prevention and Care of Athletic Injuries (2)

Select P.E. 460–School Camping and Outdoor Education (2) *or* a recreation education course approved by adviser 2 units

Select at least 5 units of additional courses in physical education with approval of adviser 5 units

22 units

MASTER OF ARTS DEGREE

The master of arts degree program is designed to give teachers and administrators of physical education experience in analyzing critically the problems in testing, programming, administering, and teaching the physical education program in the secondary schools. It attempts to add depth to the professional preparation of leaders in this field and serves as a basis for further study.

Prerequisite: Acceptable undergraduate preparation in the field of physical education.

1. Required courses:
    - P.E. 501–Tests and Measurements in Physical Education 2 units
    - P.E. 522–Seminar in Current Problems in Physical Education 3 units
2. P.E. 599A-B and/or other 500 level courses in physical education 7 units
3. Additional upper division or graduate courses within the Division of Health and Safety, Physical Education, Recreation and Athletics 3 units
4. Courses outside the Division of Health and Safety, Physical Education, Recreation and Athletics 6 units
5. Electives 9 units
6. The comprehensive examination required of all candidates who do not take P.E. 599A-B.

30 units

COURSES OF INSTRUCTION

LOWER DIVISION

GENERAL EDUCATION

Courses of instruction listed 150-155, 251-254, and 351-354 satisfy the general education requirement in this area. Students must register in Physical Education 150 for their first experience in the general education program. The second semester course may be selected from the available activities. Two units are required and up to four units may be applied toward the total general education requirement. A maximum of eight units in physical education activities may be counted for graduation credit.

150 Fundamentals of Physical Education (1) Fall, Spring
Testing program in the four areas of individual activities, team sports, aquatics, and dance. Instruction in an activity according to the student's need.

155W-X-Y-Z Adapted Physical Education (1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Individual program of corrective exercise and adapted sports activities for the atypical student. Assignment to this program is made through the co-operation of the school physician.

Individual Activities

Courses numbered 151 are activities of an individual and dual nature designed to develop skill, knowledge of rules, background, analysis of techniques, and desirable attitudes toward participation.

151a Archery (1) Fall, Spring

151b Badminton (1) Fall, Spring

151d (W) Body Dynamics (1) Fall, Spring

151f Fencing (1) Fall, Spring

151g Golf (1) Fall, Spring

151gt Gymnastics and Tumbling (1) Fall, Spring

151h Handball (1) Fall, Spring

151t Tennis (1) Fall, Spring

151w (M) Wrestling (1) Fall, Spring

Team Sports

Courses numbered 152 are activities of a team nature designed to develop skill, knowledge of rules, background, analysis of techniques, and desirable attitudes toward participation.

152bv (M) (W) Basketball-Volleyball (1) Fall, Spring

152f (W) Field Sports for Women (1) Fall, Spring

152s (M) (W) Softball (1) Fall, Spring

152ss (M) Soccer-Speedball (1) Fall, Spring

152tf (M) Touch Football (1) Fall, Spring

Aquatics

Courses numbered 153 and 253 are water activities designed to develop skill, background, knowledge, ability of analysis of techniques, safety skills, and desirable attitudes toward water activities. Prerequisite: Consent of instructor.

153s Beginning Swimming (1) Fall, Spring

253s Intermediate Swimming (1) Fall, Spring

Dance

Courses numbered 154 and 254 are dance activities designed to develop skill, background knowledge, ability of analysis, and desirable attitudes toward the dance. Prerequisite: Consent of instructor.

154m Beginning Modern Dance (1) Fall, Spring

154s Social Dance (1) Fall, Spring

154sr Square and Round Dance (1) Fall, Spring

254m Intermediate Modern Dance (1) Fall, Spring

Intercollegiate Athletics

Students must obtain consent of the coach to register for intercollegiate athletics. The student athlete must complete Physical Education 150. Other units earned in intercollegiate athletics may be counted toward the general education requirement for graduation.

200 Football (1) Fall, Spring

201 Basketball (1) Fall, Spring

202 Water Polo (1) Fall

203 Cross Country (1) Fall

204 Wrestling (1) Fall

205 Bowling (1) Fall

206 Baseball (1) Fall, Spring

207 Track and Field (1) Fall, Spring

208 Golf (1) Spring

209 Tennis (1) Spring

210 Swimming (1) Spring

211 Gymnastics and Tumbling (1) Spring

PROFESSIONAL PHYSICAL EDUCATION

180 (M) (W) Professional Activities I (2) Fall

For physical education majors and minors. Analyzing, demonstrating, practicing and evaluating the skills involved in the activities of: (for women) soccer, speedball, speed-a-way, hockey, calisthenics, marching, stunts and tumbling, badminton, handball, games and relays; (for men) football, speedball, soccer, badminton, handball, games and relays.

181 (M) (W) Professional Activities II (2) Spring

For physical education majors and minors. Analyzing, demonstrating, practicing, and evaluating the skills involved in the activities of: (for women) modern dance and aquatics; (for men) aquatics, hand to hand, apparatus, body dynamics, jujitsu, wrestling, boxing, calisthenics, marching, stunts and tumbling.

199 History and Development of Physical Education (2) Fall
History, development and background of school physical education programs.

280 (M) (W) Professional Activities III (2) Fall
For physical education majors and minors. Analyzing, demonstrating, practicing and evaluating the skills involved in the activities of: (for women) archery, tennis, golf, modern dance; (for men) archery, tennis, golf, basketball, volleyball.

281 (M) (W) Professional Activities IV (2) Spring
For physical education majors and minors. Analyzing, demonstrating, practicing, and evalauting the skills involved in the activities of: (for women) folk dance, square and round dance, and social dance, softball, basketball, volleyball; (for men) folk dance, square and round dance, and social dance, baseball, track and field.

295 Water Safety (1) Fall, Spring
Red Cross senior lifesaving.

UPPER DIVISION

General Education

Advanced courses in physical education activities for general education are listed 351-354. These courses are designed for the advanced student in each activity.

351b Advanced Badminton (1) Fall, Spring
Prerequisite: Consent of instructor.

351g Advanced Golf (1) Fall, Spring
Prerequisite: Consent of instructor.

351ga Advanced Gymnastics and Apparatus (1) Fall, Spring
Prerequisite: Consent of instructor.

351t Advanced Tennis (1) Fall, Spring
Prerequisite: Consent of instructor.

353as Advanced Aquatic Sports
Prerequisite: Consent of instructor.

353rs Rhythmic Swimming (1) Fall, Spring
Prerequisite: Consent of instructor.

354m Advanced Modern Dance (1) Fall, Spring
Prerequisite: Consent of instructor.

Professional Physical Education

337 Advanced Dual and Individual Sports (1) Spring
Practice in advanced performance techniques and analyzing procedures for various individual and dual activities. Selection of activities dependent on needs of students enrolled.

338 (M) (W) Advanced Team Sports (1) Fall
Practice in advanced performance techniques and analyzing procedures for various team sports. Selection of activities dependent on needs of students enrolled.

398 Work-Study Assignments and Reports * (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 Methods of Teaching Square and Round Dance (2) Fall
Techniques and materials for teaching and calling square and round dances.

402 Methods of Teaching Modern Dance (2) Spring
Prerequisite: Elementary modern dance, or consent of instructor. Techniques and organization of teaching modern dance in the elementary and secondary schools; history, philosophy, principles, composition.

403 Methods of Teaching Social Dance (2) Fall
Techniques and materials for teaching the basic steps of the waltz, fox trot, tango, samba, and other current popular dances.

404fs Methods of Teaching Team Sports for Women I (2) Fall
Prerequisites: Hockey, soccer, speedball, speedaway activity or consent of instructor. Techniques and organization of teaching hockey, soccer, speedball, and speedaway in the secondary schools.

404ss Methods of Teaching Team Sports for Women II (2) Spring
Prerequisites: Volleyball, basketball, softball activity or consent of instructor. Techniques and organization of teaching volleyball, basketball, and softball in the secondary schools.

405 Methods of Teaching Water Safety (2) Spring
Prerequisite: Current Red Cross certificate in senior lifesaving. American Red Cross course which qualifies instructors in water safety.

406 Methods of Teaching Individual Sports (2) Fall, Spring
Prerequisite: Individual and dual sports activity, including gymnastics and tumbling, or consent of instructor. Techniques of teaching individual and dual sports; methods of organizing such instruction.

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* Eight units is the maximum number permitted in 496 or a combination of 496 and 398. No more than four units may be earned in any one activity. 496 and 398 mav not be taken concurrently.

407 Methods of Coaching Football (2) Fall, Spring
Prerequisite: Football activity, or consent of instructor. Techniques of coaching, organization of practice; handling of players; principles of competition; systems of offense and defense; purchase and care of equipment.

408 Methods of Coaching Basketball (2) Fall, Spring
Prerequisite: Basketball activity, or consent of instructor. Techniques of coaching, organization of practice; handling of players; principles of competition; systems of offense and defense; purchase and care of equipment.

409 Methods of Coaching Tennis and Swimming (2) Spring
Prerequisites: Tennis and swimming activity, or consent of instructor. Problems involved in coaching tennis and swimming; methods of coaching skills and techniques of competitive tennis and swimming; laboratory practice.

410 Methods of Coaching Track and Field (2) Spring
Prerequisites: Track and field activity or consent of instructor. Problems involved in coaching track and field; methods of coaching skills and techniques, track, and field events, laboratory practice.

411 Methods of Coaching Baseball (2) Spring
Prerequisite: Baseball or softball activity or consent of instructor. Problems involved in coaching baseball; methods of coaching skills and techniques of baseball; laboratory practice

417(M) Sports Officiating for Men (2) Fall, Spring
Problems and techniques of officiating various sports for boys and men.

418(W) Sports Officiating for Women (2) Spring
Prerequisites: Physical Education 404, 406, and 409, or consent of instructor. Problems, techniques, and practice in officiating various sports for girls and women. Leads to local and national officials ratings.

420 Physical Education in Elementary Schools (3) Fall, Spring
Physical education in the elementary schools; program organization and activities.

425 Principles of Physical Education (2) Fall, Spring
Problems, issues, and controversies in the field of physical education; exploration of current practices and ideas.

431 Kinesiology (3) Fall, Spring
Prerequisite: Anatomy 201. Analysis of joint and muscular action in relation to movement; application of the basic principles of mechanics to efficiency of performance in a variety of selected physical education activities.

432 Adapted Physical Education (2) Fall, Spring

Prerequisites: Anatomy 201. Administration of group and individual exercises for the prevention and correction of various functional disorders and structural defects; laboratory practices.

433 Physiology of Activity (3) Fall, Spring

Prerequisite: Physiology 201. Effects of various types of physical activity upon the circulatory, respiratory, and other physiological processes. How skill, endurance, fatigue, training, and related factors affect athletic performance.

434 Prevention and Care of Athletic Injuries (2) Fall, Spring

Prerequisites: Physiology 201 or Anatomy 201. Conditioning for the prevention of injuries; techniques of massage, bandaging, and taping; immediate care of injuries; methods of recovery treatment.

444 Organization and Administration of Physical Education and Athletics (2) Fall, Spring

Administrative policies, selection of staff; construction and use of facilities; class organization, finances and budgeting; purchase and care of equipment; publicity in physical education, athletics, and intramurals.

460 School Camping and Outdoor Education (2) Fall

Aims, organization, administration, and program of the school camp.

496W-X-Y-Z Special Projects * (1-2) Fall, Spring

Prerequisites: Consent of instructor and the division chairman. Participation, under faculty supervision, in planning, preparing, presenting, and coaching of Los Angeles State College sponsored intramural and intercollegiate athletic activities.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

501 Tests and Measurements in Physical Education (2) Fall, Spring

Prerequisite: Graduate status with major in physical education or consent of instructor. Test of anthropometry, organic function, native physical capacity, achievement, and knowledge; their uses in the physical education program.

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* Eight units is the maximum number permitted in 496 or a combination of 496 and 398. No more than four units may be earned in any one activity. 496 and 398 may not be taken concurrently.

510 Supervision of Physical Education (2) Fall, Spring
Prerequisite: Graduate status with major in physical education or consent of instructor. History, philosophy, principles, and techniques of supervising physical education in the elementary and secondary schools; professional qualities and preparation of supervisors.

522 Seminar in Current Problems in Physical Education (3) Fall, Spring
Prerequisite: Graduate status with major in physical education or consent of instructor. Consideration of current problems in physical education through analysis of literature and research findings.

545 Program Planning in Physical Education (2) Fall, Spring
Prerequisite: Graduate status with major in physical education or consent of instructor. History, background, philosophy, and current types of physical education instructional programs at the elementary, junior high school, high school, and junior college levels; methods of planning functional physical education curricula; adaptation of programs to facilities and staff.

546 Problems in Intramural and Interscholastic Athletics (2) Fall, Spring
Prerequisite: Graduate status with major in physical education or consent of instructor. Current problems and recent trends in the conducting of intramurals and interscholastic athletics. Principles, procedures, and organization in competitive athletics.

599A Graduate Project (1) Fall, Spring
Prerequisite: Graduate status with major in physical education. Definition and identification of a project, project writing procedure, library research, organization and form of project. Development by the student of a proposed project problem.

599B Graduate Project (2) Fall, Spring
Prerequisite: Completion of or concurrent enrollment in P.E. 599A. Development, writing and completion of an actual graduate project under the guidance of a faculty committee.

PHYSICAL SCIENCE

(In the Division of Science and Mathematics)

STAFF: Jaffe (Co-ordinator), Andreoli, Currell, Frisch, Jacobs, Keys, Onak, Richmond, Stahl, Thompson.

BACHELOR'S DEGREE CURRICULA

General Secondary Teaching Major in Physical Science

(With accompanying minor in Biological Science or Mathematics)

The courses listed below are selected to provide a broad training in the physical sciences combined with a minor in either biological science or mathematics for the teaching major. The combined physical science major and biological science minor includes the program listed below plus 10 units of approved upper division biological science courses. The combined physical science major and mathematics minor includes the program listed below plus nine units of approved upper division mathematics courses. See also pages 140-141 for professional education requirements.

Lower Division

Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Mathematics 100—Basic Mathematical Analysis *	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units
Physics 201—General Physics I	4 units
Physics 202—General Physics II	4 units
Physics 203—General Physics III	4 units
Geology 101—Physical Geology	4 units
Botany 100—General Botany	5 units
Zoology 100—General Zoology	5 units

Upper Division

Chemistry 401A—Organic Chemistry I	3 units
Chemistry 402A—Organic Chemistry Laboratory	2 units
Astronomy 411—Introduction to Astrophysics	3 units
Physics 401—Modern Physics	3 units
Physical Science 444—Frontiers of Physical Science	3 units
Biological Science electives selected with approval of adviser *or* Mathematics electives selected with approval of adviser	9–10 units
	71–72 units†

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* See first footnote page 301.

† When a student has completed 68 units in his major and minor program a B.S. degree in physical science will be awarded if all other graduation requirements have been met. The graduate year must include six units of physical science or mathematics courses in the 400 series.

SUGGESTED COURSE SEQUENCE FOR GENERAL SECONDARY TEACHING MAJOR IN PHYSICAL SCIENCE

(With accompanying minor in Biological Science)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Chem. 101—Gen. Chem.	5	Chem. 102—Gen. Chem. and Qual. Anal.	5
*Math. 100—Basic Math. Anal.	4	Math. 201—Anal. Geom. and Calc. I	4
Geol. 101—Phys. Geol.	4	Physics 201—Gen. Physics I	4
†Engl. 150—Written Expr. *or* Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3

SOPHOMORE YEAR

Math. 202—Anal. Geom. and Calc. II	4	Physics 203—Gen. Physics III	4
Physics 202—Gen. Physics II	4	Bot. 100—Gen. Botany	5
Zool. 100—Gen. Zool.	5	Art 150—Art, Music, Dance	3
Govt. 150—Govt. and Am. Soc.	3	Psych. 150—Human Behavior	3
		Phys. Educ. 150	1

JUNIOR YEAR

Chem. 401A—Org. Chem.	3	Educ. 300—Intro. Cred. Prog.	N.Cr.
Chem. 402A—Org. Chem. Lab.	2	Bio. Sci. electives	3
Bio. Sci. elective	3	Engl. 250—Underst. Lit.	3
Phil. 150—Phil. Ideas	3	Hist. 250—U. S. History	3
Phys. Educ. elective	1	Educ. 413—Psych. and Soc.	5
Electives	4	H&S 350—Personal Health	2

SENIOR YEAR

Bio. Sci. elective	4	Astron. 411—Intro. to Astro Phys.	3
Educ. 471—Sec. Educ.	5	Gen. Educ. electives	5
Educ. 493—Methods	2	Educ. 493—Methods	2
Electives	5	Gen. Educ. Soc. Sci. elective	3
		Elective	3

GRADUATE YEAR

Physics 401—Modern Physics	3	Phys. Sci. 444—Front. Phys. Sci.	3
Educ. 443Y—Directed Teach.	3	Educ. 443Z—Directed Teach.	3
Educ. 444Y—Problems Sec.	1	Educ. 444Z—Problems Sec.	2
Educ. 480—Counsel and Guid.	2	Educ. 490—Audio-Vis.	2
Electives	4	Electives	3

SUGGESTED COURSE SEQUENCE FOR GENERAL SECONDARY TEACHING MAJOR IN PHYSICAL SCIENCE

(With accompanying minor in Mathematics)

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Chem. 101—Gen. Chem.	5	Chem. 102—Gen. Chem. & Qual. Anal.	5
**Math. 100—Basic Math. Anal.	4	Math. 201—Anal. Geom. & Calc. I	4
Geol. 101—Phys. Geol.	4	Physics 201—Gen. Physics I	4
†Engl. 150—Written Expr. *or* Lang. Arts 150A	3	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3

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* Students having four years of high school mathematics must start their program with Math. 201 and complete both Math. 202 and 203.

† See "Note" on page 55.

** Students having four years of high school mathematics must start their program with Mathematics 201 and substitute three or four units of a mathematics elective after the completion of Mathematics 203.

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
Math. 202—Anal. Geom. & Calc. II	4	Math. 203—Anal. Geom. & Calc. III	4
Physics 202—Gen. Physics II	4	Physics 203—Gen. Physics III	4
Bot. 100—Gen. Botany	5	Zool. 100—Gen. Zoology	5
Govt. 150—Govt. & Am. Soc.	3	Psych. 150—Human Behavior	3

JUNIOR YEAR

Chem. 401A—Org. Chem.	3	Mathematics elective	3
Chem. 402A—Org. Chem. Lab.	2	Hist. 250—U. S. History	3
Mathematics elective	3	Phil. 150—Phil. Ideas	3
Art 150—Art, Music, Dance	3	Educ. 413—Psych. & Soc.	5
Phys. Educ. 150	1	H&S 350—Personal Health	2
Electives	4		
Educ. 300—Intro. Cred. Prog.	N.Cr.		

SENIOR YEAR

Engl. 250—Underst. Lit.	3	Astron. 411—Intro. Astro. Phys.	3
Educ. 471—Sec. Educ.	5	Gen. Educ. electives	5
Educ. 493—Methods	2	Educ. 493—Methods	2
Phys. Educ. 150	1	Gen. Educ. Soc. Sci. elective	3
Electives	5	Elective	3

GRADUATE YEAR

Physics 401—Modern Physics	3	Phys. Sci. 444—Front. Phys. Sci.	3
Educ. 443Y—Directed Teach.	3	Educ. 443Z—Directed Teach.	3
Educ. 444Y—Problems Sec.	1	Educ. 444Z—Problems Sec.	2
Educ. 480—Counsel & Guid.	2	Educ. 490—Audio-Vis.	2
Electives	4	Electives	3

General Secondary Teaching Minor in Physical Science

See also pages 140-141 for professional education requirements. A teaching major in a different teaching field is also required.

*Biological Science 153—Principles of Biology I *or* Botany 100—General Botany *or* Zoology 100—General Zoology	3-5 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Physics 101—General Physics I	4 units
Physics 102—General Physics II	4 units
Mathematics 100—Basic Mathematical Analysis	4 units
Select from the folowing at least 6 units Astronomy 401—History of Astronomy (3) Chemistry 401A—Organic Chemistry (3) Geology 101—Physical Geology *or* Geology 386—Principles of Geology (3) Physics 401—Modern Physics (3)	6 units
	29-31 units

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* Students having credit for Math. 100 by examination and four years of high school mathematics *or* as part of their mathematics major, must register for Botany 100 or Zoology 100.

COURSES OF INSTRUCTION

Physical Science

151 Principles of Physical Science I (3) (General Education)
Study of basic concepts of motion, energy, and matter and their relationship to man's environment. Emphasis on methods of scientific inquiry.

152 Principles of Physical Science II (3) (General Education)
Prerequisite: Physical Science 151. Study of chemical aspects of matter. Application of previously learned concepts to the study of earth, earth processes and earth history, and to some concepts of the universe.

444 Frontiers in Physical Science (3)
Prerequisite: Upper division standing with a major or minor in physical science plus Physics 401. Current problems in astronomy, chemistry, geology, and physics, stressing the modern role of physical science.

PHYSICS

(In the Division of Science and Mathematics)

STAFF: Jacobs (Department Head), Stahl, Thompson. *Part-time:* Clayton, Hirsch, Kenealy, Turner.

BACHELOR'S DEGREE CURRICULA

Two majors are offered in physics, one leading to the bachelor of science degree and another leading to the bachelor of arts degree. While both contain a wide coverage of the basic fields of physics, the B.S. program (132 units) includes advanced laboratory courses and additional elective work to prepare the student for graduate work or immediate employment as a professional physicist. The B.A. major is intended for the prospective teacher or liberal arts student. These two programs are identical in the lower division.

Bachelor of Science Major in Physics

Lower Division

Physics 201, 202, 203—General Physics I, II, III	12 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Geology 101—Physical Geology *	4 units
Mathematics †	15-16 units

Upper Division

Astronomy 411—Introduction to Astrophysics	3 units
Physics 301—General Physics IV—Modern Physics	4 units
Physics 411—Methods of Measurement	3 units
Physics 412—Basic Electronics	4 units
Physics 425A-B Introduction to Theoretical Physics	8 units
Physics 426A-B Electricity and Magnetism	4 units
Physics electives	11-12 units

(Physics electives may include course work in mathematics or any science area with approval of adviser. Physics 431—Geometric and Physical Optics (4) is recommended for all majors.)

79 units

Bachelor of Arts Major in Physics

Lower Division

(Requirements are same as for Bachelor of Science Major)	41-42 units

Upper Division

Astronomy 411—Introduction to Astrophysics	3 units
Physics 301—General Physics IV—Modern Physics	4 units
Physics 425A-B Introduction to Theoretical Physics	8 units
Physics 426A-B Electricity and Magnetism	4 units

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* Geology 101—Physical Geology is recommended but not required of students transferring to L. A. S. C. as juniors.

† The typical sequence in mathematics will include Math. 201, 202, 203, and 401. For students who do not have the prerequisites required for Math. 201 the required sequence will be Math. 100, 201, 202, and 203. For such students it is strongly recommended that Math. 401 be taken as an elective.

Additional units in physics selected with approval of an adviser .... 8-9 units
(Physics electives may include course work in mathematics or any science area with approval of adviser. Physics 431—Geometric and Physical Optics (4) is recommended for all majors.)

69 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR PHYSICS MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Mathematics, see page 304	4	Physics 201—Gen. Physics I	4
Chem. 101—Gen. Chem.	5	Mathematics, see page 304	4
Geol. 101—Phys. Geol.	4	Chem. 102—Gen. Chem. and Qual. Anal.	5
† Engl. 150—Written Expr. *or* Lang. Arts 150A	3	† Sp. 150—Written Expr. *or* Lang. Arts 150B	3
Phys. Educ. 150	1	Phys. Educ. elective	1

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
Physics 202—Gen. Physics II	4	Physics 203—Gen. Physics III	4
Mathematics, see page 304	4	Mathematics, see page 304	3–4
Govt. 150—Govt. & Am. Soc.	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, and Dance	3	Bio. Sci. 153—Prin. of Bio.	3
Hist. 250—U.S. History	3	Phil. 150—Phil. Ideas	3

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Physics 301—Gen. Physics IV	4	Astron. 411—Astrophysics	3
Physics 425A—Theor. Phys.	4	* Physics 412—Basic Electronics	4
Physics 426A—Elec. and Mag.	2	Physics 425B—Theor. Phys.	4
Elective, see page 304	3	Physics 426B—Elec. and Mag.	2
Gen. Educ. Soc. Sci. elective	3	Engl. 250—Underst. Lit.	3

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
* Physics 411—Methods of Meas.	3	Physics electives	3–6
Physics electives	3–6	Gen. Educ. elective	3
H & S 350—Personal Health	2	Electives	7–10
Gen. Educ. elective	3		
Electives	3–6		

MASTER'S DEGREE CURRICULA

A master's degree in physics may be part of the curriculum by fall semester 1960. For information, contact either the Department of Physics or the Division of Science and Mathematics.

COURSES OF INSTRUCTION

Astronomy

401 History of Astronomy (3)

Important astronomical concepts and problems from the standpoint of their historical development and the contributions of great astronomers. Does not emphasize mathematical formulation of the subject.

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* For B.S. majors only. B.A. majors will substitute elective.

† See "Note" on page 55.

411 Introduction to Astrophysics (3)
Prerequisites: Physics 203, Mathematics 202. Study of kinematics and dynamics of the earth, solar system, stars, observational data and their determination, stellar atmospheres and interiors, and stellar evolution; includes description of gallactic and extra-gallactic systems.

Physics

101 Physics I (4)
Prerequisites: Math. 100 or permission of instructor. Presentation of physics without the use of calculus. Includes mechanics, heat, sound and light. Emphasis on the application of physical principles to natural phenomena. Not accepted for physical science majors; required for biological science majors and recommended for students in behavioral sciences.

102 Physics II (4)
Prerequisite: Physics 101. Continuation of Physics 101. Includes electricity, magnetism, atomic, and nuclear physics. Lecture three hours; laboratory three hours.

201 General Physics I (4)
Prerequisite: Math. 201 (may be taken concurrently). Detailed and fundamental treatment of mechanics using calculus. Intended primarily for physics and engineering majors. Lecture three hours; laboratory three hours.

202 General Physics II (4)
Prerequisites: Physics 201, Math. 202 (may be taken concurrently). Continuation of Physics 201. Includes heat, light, and sound. Lecture three hours; laboratory three hours.

203 General Physics III (4)
Prerequisites: Physics 202, Math. 202. Continuation of Physics 202. Includes electricity, magnetism. Lecture three hours; laboratory three hours.

301 General Physics IV—Modern Physics (4)
Prerequisites: Physics 203. Continuation of Physics 203. Includes discussion of electron physics, atomic and molecular structure, nuclei and nuclear particles. Lecture three hours; laboratory three hours.

398 Work-Study Assignments and Reports (1-2)
Prerequisite: Active, approved employment under the work study program. Analysis and reports of the student's performance; regular group meetings.

401 Modern Physics (3)
Prerequisites: Physics 101 and 102 or equivalent. Basic principles of modern particle physics and electronics. Involves a minimum of mathe-

matics and stresses accurate understanding of the basic concepts. Recommended for teaching minors. Not open to physics or physical science majors.

411 Methods of Measurement (3)
Prerequisite: Physics 203. Precision measurement and application of statistics to error analysis. Theory and application of electrical and magnetic measuring instruments. Lecture two hours; laboratory three hours.

412 Basic Electronics (4)
Prerequisite: Physics 203, Math. 203. Electronic circuits with primary emphasis on factors entering into the design, use, and analysis of electronic instruments. Includes circuit analysis, properties of electron tubes, power supplies, amplifiers, feedback, multivibrators, etc. Lecture three hours; laboratory three hours.

425A-B Introduction to Theoretical Physics (4-4)
Prerequisites: Physics 203, Math. 203. Introduction to the application of mathematics to the solution of problems in physics. Emphasis on general field of mechanics. Mathematical topics include vector calculus, differential equations, calculus of variations, complex variables.

426A-B Electricity and Magnetism (2-2)
Prerequisites: Physics 203, Mathematics 203. Theoretical electricity and magnetism; introduction to solution of boundary value problems. Includes electrostatics, electrodynamics and electromagnetic fields.

427 Heat and Thermodynamics (3)
Prerequisite: Physics 203. Introductory course covering fundamental concepts of thermodynamics with emphasis on principles involved.

428 Statistical Physics (3)
Prerequisite: Physics 427. Continuation of Physics 427 including statistical mechanics and application of statistical mechanics and thermodynamics to kinetic theory.

431 Geometric and Physical Optics (4)
Prerequisite: Physics 301. Intermediate course dealing with problems of geometric optics, interference, diffraction, and other topics of physical optics. Lecture three hours; laboratory three hours.

432 Introduction to Quantum Mechanics (3)
Prerequisite: Physics 425A. Elementary introduction to quantum mechanics. Emphasis on principles rather than mathematical formulation. Includes uncertainty principle, Schroedinger's equation, exclusion principle, harmonic oscillator, hydrogen atom, scattering and binding energy problems. Offered on demand.

433 Introduction to Solid State Physics (3)
Prerequisites: Physics 301 and 425A. Introduction to physical processes in solids including energy band theory, electrical conduction, optical absorbtion, thermal behavior, magnetism, crystal structure and the chemical bond. Offered on demand.

434 Introduction to Low Temperature Physics (3)
Prerequisite: Physics 427. Introductory course dealing with the phenomena of low temperature and the experimental techniques used.

435 Elementary Reactor Theory (3)
Prerequisite: Physics 301 and 425A. Introduction to nuclear reactor theory. Includes the fission process, neutron diffusion theory, reactor equations, stability and control problems.

441 Radiation Physics (3)
Prerequisite: Physics 102 or equivalent. Qualitative and semi-quantitative discussion of types of radiation, their detection, effects of radiation on materials, biological effects of radiation and radiation hazards. Not open to physics majors.

442 Radiation Physics Laboratory (2)
Prerequisite: Physics 441. Designed to familiarize student with the handling of radioactive material and X-ray emitting sources, and in-field methods of detection, control, and mop-up. Laboratory six hours.

445 Advanced Electronics (3)
Prerequisite: Physics 412. Further study of topics discussed in Physics 412; emphasis on circuits most commonly used in research laboratories. Lecture two hours; laboratory three hours.

465 Microwave Electronics (3)
Prerequisite: Physics 426B. Introduction to electrical field theory, generation of microwaves. Includes discussion of klystrons, magnetrons, traveling wave tubes and high frequency diodes.

466 Microwave Laboratory (1)
Prerequisite: Physics 465 (may be taken concurrently). Experiments on microwave generators, bridges, properties of microwave circuit elements such as "T's," directional couplers. Laboratory three hours.

469 Physical Electronics (3)
Prerequisite: Physics 426AB. Theory of electron emission, behavior of electrons in electric and magnetic fields, theory and design of electron devices.

470 Modern Physics Laboratory (3)

Prerequisite: Approval of instructor. Laboratory course to familiarize students with modern laboratory techniques. Includes high vacuum, materials of physics, particle detectors. Lecture one hour; laboratory six hours.

472 Physics Research Projects (1-3)

Prerequisite: Approval of instructor. Laboratory course organized on a project basis open to a limited number of exceptionally qualified physics majors each year. Emphasis on developing experimental ability and initiative of student by allowing him to carry out projects of his own design.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

POLICE SCIENCE AND ADMINISTRATION

(In the Division of Technical Sciences)

STAFF: G. D. Gourley (Department Head), Bristow, Diamond, Hankey, Jones, Williams. *Part-time:* Duncan, Fulton, Glavas, Gockey, B. Gourley, Houghton, Iannone, Ireland, Koenig, Puthuff, Smith, Stallings.

BACHELOR'S DEGREE CURRICULUM

Major in Police Science and Administration

Designed for either inservice or preservice students who wish to prepare for, or to improve themselves in, the several forms of police work.

A total of 128 units is required for the B.S. degree in Police Science and Administration, including a minimum of 42 units within the major, not less than 22 units of the major being in upper division work. An additional 12 units is required in related fields.

Lower Division

Police Science 101—Criminal Justice	3 units
Police Science 102—Police Administration	3 units
Police Science 124—Traffic Law	2 units
Police Science 126—Criminal Law	3 units
Police Science 221—Law of Evidence	2 units
Police Science 235—Criminal Investigation	3 units
Police Science 236—Traffic Control	2 units
Police Science 238—Police Patrol	2 units

Upper Division

Police Science 361—Criminalistics	3 units
† Police Science 401—Police Administrative Functions	3 units
† Police Science 402—Police Line Functions	3 units
† Police Science 403—Police Auxiliary Functions	3 units
† Police Science 404—Special Problems in Law Enforcement	3 units
Select from the following	7 units
Police Science 322—Criminal Procedure (2)	
Police Science 337—Vice Control (2)	
Police Science 363—Interrogation and Lie Detection (2)	
Police Science 398—Work-Study Assignments and Reports (1-2)	
Police Science 436—Correctional Administration (3)	
Police Science 439—Juvenile Law and Procedure (3)	
Police Science 475—Industrial Plant Protection (3)	
Police Science 481—Police Bibliography and Research (3)	
Police Science 499AB—Independent Study (1-3)	
Select from the following	12 units
*Government 303—State and Local Government (3)	
*Government 305—American Federal Government (3)	
Government 440—Constitutional Law (3)	

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* Prerequisites for the master of science degree in Public Service with an option in Police Science and Administration.

† Prerequisite: Police Science 102 or consent of instructor.

Psychology 410—Abnormal Psychology (3)
Psychology 422 or Sociology 422—Social Psychology (3)
*Sociology 210—Elementary Social Statistics (3)
*Sociology 480—Criminology (3)

54 units

(Additional electives to be chosen only in consultation with adviser.)

NOTE: *Students Intending to Transfer from City or Junior Colleges.* Students intending to transfer from city or junior colleges to Los Angeles State College to continue work for a B.S. degree in Police Science and Administration are advised to concentrate upon general education requirements while in the lower division. Not over 20 units of lower division police courses will be accepted to apply toward the total major requirement. No lower division police course should be taken which is duplicated in the upper division curriculum of Los Angeles State College.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR POLICE SCIENCE MAJOR

First semester	*Units*	*Second semester*	*Units*
FRESHMAN YEAR			
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. & Am. Soc.	3	Art 150—Art, Music, Dance	3
Phys. Educ. 150	3	Phys. Educ. elective	3
P. S. 101—Crim. Justice	3	P. S. 126—Crim. Law	3
P. S. 102—Police Adm.	3	Elective	3
SOPHOMORE YEAR			
Phil. 150—Phil. Ideas	3	Engl. 250—Underst. Lit.	3
Bio Sci. 154 *or* Phys. Sci. 152	3	Hist. 250—U. S. History	3
Psych. 150—Human Behavior	3	Gen. Educ. Soc. Sci. elective	3
P. S. 124—Traffic Law	2	P. S. 236—Traffic Control	2
P. S. 221—Law of Evidence	2	P. S. 238—Police Patrol	2
P. S. 235—Crim. Invest.	3	Electives	3
JUNIOR YEAR			
H&S 350—Personal Health	3	Gen. Educ. elective	3
P. S. 361—Criminalistics	3	†P. S. 402—Police Line Funct.	3
†P. S. 401—Pol. Adm. Functions	3	Police Science electives, p. 301	2–3
Police Science electives, p. 301	2–3	Related electives, p. 301	3
Related electives, p. 301	3	Electives	4–5
Electives	2–3		
SENIOR YEAR			
Gen. Educ. elective	3	†P. S. 404—Spec. Prob.	3
†P. S. 403—Pol. Aux. Functions	3	Police Science electives, p. 301	2–3
Police Science electives, p. 301	2–3	Related electives, p. 301	3
Related electives, p. 301	3	Electives	7–8
Electives	4–5		

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* See "Note" on page 55.
† Prerequisite: Police Science 102 or consent of instructor.

MASTER OF SCIENCE DEGREE

The master of science degree in public service with an option in police science and administration provides occupational training in the law-enforcement service with special emphasis on the development of leadership and administrative skills.

1. Prerequisite: An appropriate baccalaureate degree from an accredited college or university and the following courses or their equivalents:
   - Government 303–State and Local Government (3)
   - Government 305–American Federal Government (3)
   - Sociology 210–Elementary Social Statistics (3)
   - Sociology 480–Criminology (3)
2. General core:
   - Government 460–Principles of Public Administration (3) *or* Government 461–Principles of Municipal Administration .... 3 units
   - Government 560–Seminar in Public Administration (3) *or* Government 561–Seminar in State and Local Administration .... 3 units
   - Government 590–Philosophy of Public Service .... 3 units
3. Core curriculum, police:
   - Government 472–Organization and Management .... 3 units
   - Police Science 481–Police Bibliography and Research .... 3 units
   - Police Science 501–Seminar in Police Administration .... 3 units
   - Police Science 538–Seminar in Police Problems .... 3 units
4. Additional courses approved by adviser .... 9 units
5. Internship, work-study or approved field projects .... 6 units
   (This requirement may be waived if the student is employed in a law enforcement agency at an acceptable level involving supervisorial or administrative responsibility or high technical proficiency.)
6. A comprehensive examination will be required.

36 units

COURSES OF INSTRUCTION

101 Criminal Justice (3) Fall
Basic course dealing with all agencies involved in administration of criminal justice; police history; organization of local, state and federal police agencies; courts and trials; jails, prisons, and reformatories; probation and parole; armed services; criminal justice in foreign countries.

102 Police Administration (3) Fall, Spring
Analysis of factors affecting police service; survey of management and organization principles applied to police service; fundamentals of personnel management; operation of patrol, investigative, traffic, vice and juvenile forces; consideration of activities involved in records management, communications, jails, property, supply and transport; special police relationships and problems.

123 Civil Law for Police (2) Spring
Brief survey of civil law and procedures including civil complaints, subpoenas, writs, and judgments of special application to the police.

124 Traffic Law (2) Fall
Study of the California Vehicle Code and related laws with reference to the traffic problem.

126 Criminal Law (3) Fall
History and development of criminal law; elements of a crime; parties to a crime; law of arrest; elements of specific crimes.

221 Law of Evidence (2) Spring
Leading rules and principles of exclusion and selection; burden of proof; nature and effect of presumptions; proof of authenticity and contents of writings; examination, competency, and privilege of witnesses; search and seizure.

235 Criminal Investigation (3) Fall, Spring
Investigative methodology in the field of crime; relations of the detective with other law enforcement divisions; techniques and principles for gathering, evaluating, and preserving physical evidence; modus operandi; sources of information; surveillance; personal identification; interrogation; preliminary and followup investigations.

236 Traffic Control (2) Fall, Spring
Organization and functions of the police traffic division; educational, engineering, and enforcement methods; technique of the traffic survey; traffic accident investigation; elements of a sound traffic program.

238 Police Patrol (2) Spring
Responsibilities, powers and duties of uniformed patrolmen; patrol procedure; field interrogation; mechanics of arrest; transportation of prisoners; raids; riot and crowd control; crime prevention functions of the officer on patrol.

262 Police Photography (2) Spring
Application of photography to the police field with emphasis on the preservation of physical evidence and its courtroom presentation.

264 Fingerprints (2) Spring
Science of fingerprints in law enforcement work, including techniques and procedures involved in classification, latent impressions, and court presentation.

322 Criminal Procedure (2) Spring
Criminal procedure from apprehension to conviction; search and seizure; arrest with and without warrants; arrest by private citizens; extradition proceedings; information and indictment; functions of the grand jury and coroner's inquest; procedure at the trial; appeals and new trials.

337 Vice Control (2) Fall, Spring
Code and case law dealing with vice; detection and suppression; apprehension and prosecution of violators; special consideration of laws dealing with gambling, prostitution and sex crimes.

361 Criminalistics (3) Fall, Spring
Collection, preservation, analysis, and interpretation of physical evidence of various types, including footprints, tiretracks, toolmarks, blood, hair, textiles, stains, dust, dirt, and debris; narcotic identification and determination of intoxication; casting and moulage; questioned documents; forensic ballistics and explosives; photomicrography and spectrography; court presentation and expert testimony. Lecture two hours; laboratory three hours. (NOTE: This course is designed to aid in the training of investigators. It does not qualify student as a criminalist or laboratory technician.)

363 Interrogation and Lie Detection (2) Fall
Survey of modern methods of handling witnesses, informants, and suspects; evaluation of lie detection methods and techniques; psychological and physiological considerations in interrogation.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 Police Administrative Functions (3) Fall, Spring
Prerequisite: Police Science 102 or consent of instructor. Detailed examination of current command-level problems and trends in police organization and management; the planning process as an aid to administrative operation in procedure, tactics and budgeting on all law enforcement levels; administration of a comprehensive personnel program including methods of selection, training, promotion, and supervision.

402 Police Line Functions (3) Fall, Spring
Prerequisite: Police Science 102 or consent of instructor. Comprehensive analysis of the organization and management of the patrol, investigative, traffic, vice, and juvenile activities of law enforcement agencies including a critical examination of procedures, methods and techniques used in implementing police line functions.

403 Police Auxiliary Functions (3) Fall, Spring
Prerequisite: Police Science 102 or consent of instructor. Detailed analysis of the organization and management of the supporting units in police agencies including structure and functions of police records and communication systems; aims, objectives and techniques of custodial care; effective control and care of property and equipment.

404 Special Problems in Law Enforcement (3) Fall, Spring
Prerequisite: Police Science 102 or consent of instructor. Analysis of special police relationships and problems; internal and external public relations; causes, methods of prevention, and techniques of handling race riots, strikes, and similar disturbances; the role of the police in civil defense and major disaster.

436 Correctional Administration (3) On Demand
Aims and objectives of correctional administration; laws; records; public relations; types of personnel and relationships to programs, including custodial and noncustodial interrelationships and divisions; physical plant and security; employment and care and treatment program.

439 Juvenile Law and Procedure (3) Fall, Spring
The California Juvenile Court Act, The Youth Authority, and other legislation governing juvenile delinquency and crime prevention; rights of juveniles as distinguished from those of adults; sociological and psychological development in California law in the prevention of crime by juveniles, including probation procedures and institutional care.

475 Industrial Plant Protection (3) On Demand
Protection of buildings and contents; organization and supervision of plant guards and watchmen; personnel investigations; theft control; principles for night lighting; organizing for emergencies; plant safety; organizing for fire protection; security surveys; wartime vs. peacetime protection.

481 Police Bibliography and Research (3) Fall
Research methodology in the police field; survey of authorities and their writings; research reports and manuscripts.

499A-B Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

501 Seminar in Police Administration (3) Fall
Prerequisites: Graduate standing and consent of the instructor. Advanced studies in police administration at the local, state, and federal levels of government; police problems, organization, personnel management, training; police patrol, investigation, vice control, traffic control; communications, records, property and equipment; juvenile delinquency control; special police problems, public relations.

538 Seminar in Police Problems (3) Spring
Prerequisites: Graduate standing and consent of instructor. Advanced investigation of and report on selected critical problems in the field of police administration. Emphasis on the scientific method and acquaintance with reliable methods of research.

PSYCHOLOGY

(In the Division of Social Sciences)

STAFF: Wilkening (Department Head), Balvin Cannicott, Diamond, Dunlap, Goldenberg, Graham, Haralson, Hutchinson, Kalish, Lewis, Lund, Marks, Phelan, Richardson, Schneider, Sprott, Thompson, Troup, Wang.

BACHELOR'S DEGREE CURRICULA

Major in Psychology

The major in psychology, consisting of 30 units of upper division courses, prepares students for graduate professional training as psychologists, while offering opportunity for specialized training in such areas as counseling and industrial psychology.

Lower Division

Psychology 101—Introduction to Psychology	3 units
Psychology 201—Elementary Physiological Psychology	3 units

Recommended: Two full years of a foreign language.

Upper Division

Core requirements

Psychology 302—Statistical Methods in Psychology	3 units
Psychology 304—Experimental Psychology	3 units
Psychology 306—Physiological Psychology	3 units
Psychology 308—Contemporary Psychology	3 units
Select 18 upper division units with consent of an adviser. This selection can include courses leading to specialization in counseling, industrial psychology, or a broad background in general psychology.	18 units
	36 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR PSYCHOLOGY MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	Psych. 101—Intro. to Psych.	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Math. 140—Basic Math. for Bus. and Soc. Sci.	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. & Am. Soc.	3	Phys. Educ. elective	1
Phys. Educ. 150	1	Elective	5
Elective	3		

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* See "Note" on page 55.

SOPHOMORE YEAR

First Semester	*Units*	*Second semester*	*Units*
Psych. 201—Elem. Physio. Psych.	3	Engl. 250—Underst. Lit.	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Art 150—Art, Music, Dance	3
Phil. 150—Phil. Ideas	3	*Anthro. 250—Cultural Anthro.	3
Hist. 250—U. S. History	3	*Phil. 250—Logic	3
Elective	4	Electives	4
JUNIOR YEAR			
Psych. 302—Statistics	3	Psych. 308—Contemporary	3
*Psych. 410—Abnormal	3	Psychology 306—Physio.	3
*Psych. 416—History	3	*Psych. 422—Social	3
Soc. 250—Man & Society	3	*Engl. 472—Am. Lit.	3
H&S 350—Personal Health	2	Electives	3
Elective	2		
SENIOR YEAR			
Psych. 304—Experimental	3	*Psych. 497—Proseminar	3
*Psychology 418—Personality	3	Psychology electives in field of concentration	3–6
Psychology electives in field of concentration	3–6	Electives	3–6
Electives	0–3		
Gen. Educ. elective	3		

Recommended electives:

(1) Math. 100, Math. 201, or Math. 350.
(2) Biological Science 410 (genetics), Physiology 100.
(3) Basic laboratory course in physical science.
(4) Two years of foreign language.

MASTER'S DEGREES IN PSYCHOLOGY

The graduate programs are built on the foundation of undergraduate preparation. The master's degrees require intensive directed study in psychology aimed at depth of understanding.

MASTER OF SCIENCE DEGREE

1. Prerequisite: Acceptable undergraduate preparation in psychology, including completion of core requirements. (See major in psychology.)
2. Area of specialization
   a. Psychology 414†—Advanced Statistical Methods in Psychology .... 3 units
   b. Psychology 500 or 501—Seminar in Advanced General Psychology .... 3 units
   c. Minimum additional "500" courses in psychology .... 12 units
   d. Comprehensive written examinations in selected fields of psychology.
3. Other courses approved in advance by the adviser .... 12 units
4. Directed field experience or field study .... 6 units

   (This requirement may be waived for students with adequate prior experience in the occupational field. The adequacy of this prior experience will be determined by the department. Any combination of field experience and teaching experience which meets the requirements for a pupil personnel Services Credential with specialization in School Psychology also satisfies this requirement.)

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* Recommended.

† If Psychology 414 was taken in undergraduate status, the adviser will recommend a "400" or "500" psychology course as a substitute.

MASTER OF ARTS DEGREE

1. Prerequisite: Same as Master of Science Degree.
2. Area of specialization
   - a. Psychology 414*—Advanced Statistic Methods in Psychology .... 3 units
   - b. Psychology 416*—History of Psychology .... 3 units
     *If Psychology 414 or 416 was taken in undergraduate status, the adviser will recommend "400" or "500" psychology courses as substitutes.
   - c. Psychology 500 or 501—Seminar in Advanced General Psychology .... 3 units
   - d. Additional "500" courses in psychology .... 9 units
   - e. Comprehensive written examinations in selected fields of psychology
3. Approved courses outside the area of psychology .... 6 units
4. Other courses approved in advance by the adviser .... 6 units
   (3 units of applicable credit may be obtained for writing of a thesis.)

COURSES OF INSTRUCTION

Lower Division

101 Introduction to Psychology (3) (Formerly Psychology 300)
Introduction to the psychological processes of development, individual differences, perception, learning, thinking, motivation, intelligence, personality and social behavior. Facts and principles pertinent to an analysis of behavior. Includes laboratory.

150 Human Behavior (3) (General Education)
Acquaints student with the history of man's persistent efforts to understand his own behavior, encouraging an appreciation of the scientific method and a readiness to apply it to problems of human behavior.

201 Elementary Physiological Psychology (3)
Prerequisite: Psychology 101. Survey of relations between behavioral and physiological processes. Covers neurons, sensory, muscular, and glandular structures and functions in their relationship to learning, perceptual, motivational and emotional activities. Includes laboratory.

Upper Division

General prerequisite: One year of college psychology or consent of instructor.

301 Mental Hygiene (2) Fall, Spring
Social and emotional adjustment and personality in the light of mental hygiene principles; special attention to adjustment problems of the college student.

302 Statistical Methods in Psychology (3) Fall, Spring
Prerequisite: Mathematics 140 or equivalent. Commonly used measures of central tendency; variability and correlation; significance of individual scores and of individual and group differences; elementary principles of research design.

304 Experimental Psychology (3) Fall, Spring
Prerequisite: Psychology 302. Experiments in problems of human learning, remembering, perception, and personality. Emphasis on basic problems of research-design and experimental techniques. Lectures and laboratory.

306 Physiological Psychology (3) Fall, Spring
The relationship between integrated behavior and physiological processes. Study of theories relating psychology and physiology.

308 Contemporary Psychology (3) Fall, Spring
Contemporary psychological theories and systems in their historical perspective and present position.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study or internship program. Analysis and reports of the student's performance; regular group meetings.

406 Mental Deficiency (3) Fall, Spring
The nature and causes of mental deficiency; physiological and psychological characteristics. Problems of social control, including education, social adjustment, institutionalization, and community responsibility.

410 Abnormal Psychology (3) Fall, Spring
Historical overview of abnormal psychology; criteria of abnormal behavior; symptomatology; disturbing forces in personality formation; therapeutic considerations.

412 Child Psychology (3) Fall, Spring
Developmental trends in infancy and childhood. Study of current literature. Credit will not be given for both Psychology 412 and Education 402.

413 Psychology of Adolescence (3) Fall, Spring
Recommended prerequisite: Psychology 412. Problems of adolescents; physical and social development during adolescence.

414 Advanced Statistical Methods in Psychology (3) Spring
Prerequisite: Psychology 302 and consent of instructor. More advanced techniques of correlation, analysis of variance, and factor analysis, as applied to testing procedure and research. Further study of research design.

416 History of Psychology (3) Fall, Spring
Consideration of the historical development of psychology from its origins in ancient philosophy and science to the end of the nineteenth century.

418 **Psychology of Personality** (3) Fall, Spring
Biological and cultural determinants of personality; dimensions of personality and their measurement or appraisal; integration of personality as related to adjustment.

420 **Human Communication** (3) Spring
Psychological factors involved in the creation and manipulation of symbols. Art and science as forms of communication. Emphasis on psychological aspects of communication media (radio, television, and motion picture).

422 **Social Psychology** (3) Fall, Spring
Inquiry into group dynamics. Study of social interaction and its effects upon the individual and the group. Credit not given for both Psychology 422 and Sociology 422.

424 **Psychology of Learning** (3) Fall, Spring
Consideration of major theoretical systems of learning; Hull, Guthrie, Tolman, Skinner. Analysis and interpretation of experimental literature.

426 **Psychological Factors in Marriage** (3) Fall, Spring
Problems of money, in-laws, sex, etc., with emphasis on the psychological insights necessary for adjustment to self and others and to social and cultural institutions.

430 **Introduction to Psychological Testing (Group)** (3)
Prerequisite: Psychology 302 or equivalent. Basic concepts of psychological measurement as applied to the construction, evaluation, and use of group-administered tests of intelligence, aptitude, interest, personality, etc. Lectures and laboratory.

431 **Psychological Testing (Individual)** (3)
Prerequisites: Psychology 302 and 430 or equivalent. The concept of intelligence; the most commonly used tests of intelligence; emphasis on practical experience in administering and interpreting individual intelligence tests (especially the Revised Stanford-Binet and the Wechsler scales). Lectures and laboratory.

433 **Psychological Testing** (Applied to the Mentally and Physically Atypical) (3)
Prerequisite: Psychology 431. Selection, administration, and interpretation of tests used for appraising the atypical individual. Survey of etiological theories. Lectures and laboratory.

436 **Counseling and Interviewing** (3) Fall, Spring
Prerequisites: Consent of instructor and senior or graduate standing. Introduction to the problems and techniques of counseling and interviewing. Presentation of the attitudes and objectives of the counselor and counselee.

438 **Survey of Clinical Psychology** (3) Fall, Spring
Prerequisite: Psychology 410. Elementary course in methods of clinical psychology with consideration of the relationship of diagnosis, therapeutic techniques, and research to the field of clinical psychology.

440 **Attitude and Opinion Measurement** (3) Fall
Prerequisite: Psychology 302. Attitude scales and public opinion surveys. Design of investigation, sampling methods, analysis of results, and applications to various psychological problems. Field work.

442 **Industrial Psychology** (3) Fall, Spring
Psychological techniques in modern industry; selection, training, and evaluation of employees; morale and promotion; fatigue and safety practices.

446 **Employment and Personnel Psychology** (3) Fall
Prerequisite: Psychology 302. The application of psychological principles to the technical problems involved in developing a personnel testing program and in appraising its effectiveness; employment procedures; job success.

448 **Psychology of Labor Relations** (3) Spring
Exploration of the human relations involved with union and management; psychological aspects of conflict and co-operation between labor and management; the role the psychologist plays in union relations. Field work and guest speakers.

497 **Psychology Proseminar** (3) Spring
Senior course: recommended for all psychology majors. Introduction to psychological method. Designed to prepare students for graduate work in psychology.

499 **Independent Study** (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly. (Open only to students majoring in Psychology.)

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and superior academic performance in psychology.

500 **Seminar in Advanced General Psychology** (3)
Critical review of current literature, theories, methods and problems, concerning sensory, learning, and symbolic processes.

501 **Seminar in Advanced General Psychology** (3)
Critical review of current literature, theories, methods and problems, concerning motivation, emotion, and perception.

504 Advanced Experimental Methods (3)
Prerequisite: Consent of instructor. Emphasis on design of experiments and apparatus employed in psychological research. The student becomes familiar with basic laboratory equipment and designs an experiment in his field of major interest. Lectures and laboratory.

512 Behavior Disorders in Children (3)
Prerequisite: Psychology 410, 412, or equivalent. Application of principles of psychology to behavior disorders in children. Designed primarily for clinicians, social workers, and parent educators.

514 Design and Analysis of Experiments (3)
Prerequisites: Phychology 414. Consideration of problems in measurement of psychological variables; examination of experimental design possibilities engendered by modern statistical techniques; practice in preparation of designs and in efficient processing of data.

522 Seminar in Social Psychology (3)
Prerequisites: Psychology 422 and the equivalent of Psychology 420 or 440. Theory, methodology, and applied problems dealing with the complex phenomena of group life. Analysis of the psychological tools for group adjustment; group dynamics, assessment of social attitude, role playing, psycho-drama, etc. Individual projects.

531 Psychodiagnostic Testing (3)
Prerequisites: Psychology 418, 431, 438 and consent of instructor. Clinical application of tests for the measurement of intelligence and personality; evaluation of qualitative aspects and limitations in functioning due to emotional and organic factors and the integration of these findings into the clinical case study. Lectures and laboratory.

534A-B Methods of Appraising Personality (3-3)
Prerequisite: Psychology 531, and consent of instructor. First semester: theories of personality and perception as a basis for understanding the implications of projective techniques. Experience in administering and interpreting the TAT, CAT, Maps, Four-Picture Test, and other thematic material. Second semester: appraising personality by means of the Rorschach Technique; administration, scoring, and basic interpretation. Lectures and laboratory.

536 Seminar in Counseling (3)
Prerequisites: Psychology 418 or 436, 438, or their equivalents, and consent of instructor. Intensive class discussion of recorded counseling interviews and of typical counseling situations, co-ordinated with reading of current literature in this area.

538 Clinical Techniques in Psychology (3)
Prerequisite: Psychology 534A-B and consent of instructor. Experience in applying diagnostic methods to actual clinical cases. Advanced analysis and integration of projective techniques and case study material; emphasis on the effective oral and written presentation of clinical findings.

541 Applied Methods for Group and Leadership Situations (3)
Prerequisite: 12 units in courses dealing with human relations and consent of instructor. Study of interpersonal relations and leadership within various social organizations. The origin of conflict, co-operation, and misunderstanding within groups. Emphasis on superior-subordinate relations. Applied methods for group motivation and activities toward accomplishing group goals with emphasis on minimizing conflict and maximizing effort.

590 Practicum in Counseling (3)
Prerequisite: Psychology 536 and consent of instructor. Supervision of field and laboratory experiences in counseling.

595 Field Experience in Psychology (1-6)
Prerequisites: Admittance to candidacy for the Master's degree in Psychology or acceptance in the Pupil Personnel Credential program in the fields of Psychology or Psychometry, and 15 units of graduate work. Admission by approval of department committee. Applications must be filed with the committee by December 15 or April 15 of the preceding semester. Directed work experience in one or more fields of psychology under supervision of a faculty member. May be repeated, but not to exceed a total of six units.

599 Graduate Project (3)

RECREATION EDUCATION

(In the Division of Health and Safety, Physical Education, Recreation and Athletics)

STAFF: Willott (Department Head), O'Brien, Olsen, Tillman. *Part-time:* Hjelte, Frank.

BACHELOR'S DEGREE CURRICULUM

Major in Recreation Education

The bachelor of science degree in recreation is designed to prepare student for employment in (a) public or group work agencies; (b) correctional or rehabilitation institutions; (c) industrial recreation. Provides the foundational training for entrance into graduate work in recreation.

All students are required to take a common core of lower and upper division courses. Professional electives offered in upper division permit a choice of subjects suited to the vocational objectives of the student. A total of 124 units is required for the B.S. degree in Recreation Education.

Lower Division

R.E. 132—Introduction to Playground Games	2 units
R.E. 232—Social Recreation Leadership	2 units
H&S 201—First Aid	2 units
R.E. 236—Camp Leadership	2 units
Art 102—Introduction to Craft Materials	2 units

Upper Division

Mu. 300—Music for Children	3 units
R.E. 462—Organization and Administration of Recreation	3 units
R.E. 468—Community Relations in Recreation	2 units
Ed. 402—Child Growth and Development	2 units
Ed. 490—Audio-Visual Instruction	2 units
R.E. 434—Dance in Community Recreation	2 units
R.E. 444—The Recreation Program	2 units
R.E. 470—Philosophy of Recreation	2 units
Psych. 301—Mental Hygiene	2 units
Soc. 482—Juvenile Delinquency	3 units
N.S. 461—Nature in California	3 units
P.E. 406—Methods of Teaching Individual Sports	2 units
R.E. 338-339—Directed Leadership	4 units
Spch. 460—Speech and Drama	3 units
Govt. 463—Public Personnel Administration	3 units
	50 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR RECREATION EDUCATION MAJOR

First semester	*Units*	*Second semester*	*Units*
FRESHMAN YEAR			
*Engl. 150—Written Expr. *or* Lang. Arts 150A	3	*Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Govt. 150—Govt. & Am. Soc.	3	Psych. 150—Human Behavior	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Phil. 150—Phil. Ideas	3
Art 150—Art, Music, Dance	3	R.E. 132—Intro. Play. Gms.	2
Phys. Educ. 150	1	Phys. Educ.	1
Elective	3	H&S 201—First Aid	1
		Elective	3
SOPHOMORE YEAR			
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Anthr. 250—Cultural Anthr.	3
Hist. 250—U. S. History	3	Engl. 250—Underst. Lit.	3
R.E. 232—Soc. Rec. Lead.	2	Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3
Art 102—Intro. to Crft. Mat.	2	Music 300—Mus. for Chil.	3
Phys. Educ. 180—Prof. Act. I	2	R.E. 236—Camp Lead.	2
Elective	3	Phys. Educ. 181—Prof. Act. II	2
JUNIOR YEAR			
R.E. 462—Org. & Adm. of Rec.	3	R.E. 444—Rec. Program	2
R.E. 468—Com. Rela. in Rec.	2	R.E. 470—Phil. of Rec.	2
Educ. 402—Child Growth	2	Psych. 301—Mental Hygiene	2
Educ. 490—Audio-Vis.	2	Soc. 482—Juvenile Delin.	3
R.E. 434—Dance in Com. Rec.	2	R.E. 398—Work-Study	2
R.E. 398—Work-Study	2	Electives	4
Elective	3		
SENIOR YEAR			
N.S. 355—Nature Study	3	Govt. 463—Public Pers. Adm.	3
Phys. Educ. 406—Methods Spts.	2	R.E. 339—Directed Leadersh.	2
R.E. 338—Directed Leadersh.	2	Consv. 354—Conservation	3
Sp. 460—Sp. & Drama	3	N.S. 461—Nature in Calif.	3
H&S 350—Personal Health	2	Electives	5
Elective	3		

MASTER OF SCIENCE DEGREE

The master of science degree in recreation is built on a broad foundation of undergraduate preparation in recreation or closely allied fields, such as: sociology, theater arts, fine arts, physical education or education and is designed for those professional groups whose needs cannot be met by undegraduate preparation.

Option 1—Recreation Administration

Designed for administrators, supervisors, leaders and group workers already in the field who desire to extend professional competencies or need additional preparation in order to qualify for specific positions.

1. Prerequisites: Preprogram conference with assigned advisers to determine adequacy of preparation for graduate program.

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‡ See "Note" on page 55.

2. Core requirements .... 15 units
   - R.E. 562–Surveys and Planning in Recreation (2)
   - R.E. 532–Construction and Maintenance of Parks, Playgrounds and Recreation Facilities (2)
   - R.E. 564–Legal and Financial Aspects of Recreation (2)
   - R.E. 566–Administration of Public Recreation (2)
   - R.E. 582–Research, Measurement, and Evaluation in Recreation (2)
   - R.E. 524–Seminar in Current Problems in Recreation (2) *or*
   - R.E. 542–Recreation for Special Groups (2)
3. Supporting courses outside the field of recreation.
   Select from the following .... 9 units
   - Govt. 461–Principles of Municipal Administration (3)
   - Govt. 560–Seminar in Public Administration (3)
   - Govt. 590–Philosophy of Public Service (3)
   - Bus. 473–Personnel Management (3)

   Select from the following .... 6 units
   - Psych. 413–Adolescent Psychology (3)
   - Psych. 420–Human Communication (3)
   - Psych. 436–Counseling and Interviewing (3)
   - Psych. 422 *or*
   - Soc. 422–Social Psychology (3)
   - Soc. 472–Community Welfare Organization (3)
   - Soc. 460–Race Relations (3)
4. Internship .... 3–6 units
   (This requirement may be waived for students with adequate prior experience in the occupational fields; to be determined by the department.)

Option 2—Recreation Leadership

Designed for graduate students with an undergraduate preparation in recreation or closely related fields, such as social welfare, theater arts and music, who seek to prepare themselves for more specialized leadership roles in recreation.

1. Prerequisites: Preprogram conference with assigned adviser to determine adequacy of preparation for graduate program.
2. Core requirements .... 15 units
   - R.E. 470–Philosophy of Recreation (2)
   - R.E. 524–Seminar in Current Problems in Recreation (2)
   - R.E. 542–Recreation for Special Groups (2)
   - R.E. 562–Surveys and Planning in Recreation (2)
   - R.E. 566–Administration of Public Recreation (2)
   - R.E. 582–Research, Measurement and Evaluation in Recreation (2)
   - R.E. 599–Graduate Project (3)
3. Students electing to follow Option 2 shall determine their area of specialization from the following (with approval of adviser) .... 15 units

   Education
   Students specializing in school or school-community recreation. (15 units)

   Social Science
   Students specializing in work with group agencies, C. Y. O., Boy Scouts, Welfare, Youth Services. (15 units)

   Related Arts
   Students specializing in arts and crafts, drama, or music. (15 units)

   NOTE: A list of courses to complete the requirements for each of these concentrations must be obtained by the student from the head of the department.

4. Internship .... 3–6 units
   (This requirement may be waived for students with adequate prior experience in the occupational field; to be determined by the department.)

COURSES OF INSTRUCTION

132 Introduction to Playground Games (2) Spring
Games of low organization, leadup games, relays, stunts, and rhythmics suitable for playgrounds, community centers and outing groups, with emphasis on leadership for recreation purposes.

232 Social Recreation in Leadership (2) Fall, Spring
Leadership techniques in various social phases of recreation.

236 Camp Leadership (2) Spring
Techniques of camp counseling and leadership; some program content; visits to nearby camps.

338 Directed Leadership in Private Recreation Agencies (2) Fall, Spring
Prerequisite: Major in Recreation Education. Supervised experience in recreation programs.

339 Directed Leadership in Public Recreation Agencies (2) Fall, Spring
Prerequisite: Major in Recreation Education. Supervised experience in recreation programs.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

434 Dance in Community Recreation (2) Fall, Spring
Conduct of community dancing including advanced techniques in round, square, and social dances.

442 Special Events in Recreation (2) Fall
The function of, and planning for, festivals and pageants in community and private recreation programs.

444 The Recreation Program (2) Fall
Problems commonly encountered in planning content of recreation program including principles of program construction, scheduling, and evaluation in various fields of recreation.

462 Organization and Administration of Recreation (3) Fall
Problems encountered in establishing and organizing a community for recreation services. Special emphasis given to governmental control, legislative provisions, municipal control, budgets, personnel, departmental organization, and administrative practices.

464 Employee Recreation (2) Fall
Fundamental techniques of organization and administration of recreation in industry.

468 Community Relations in Recreation (2) Spring
Development of the ability to interpret, promote, and publicize community recreational programs and activities through personal contacts and various publicity media.

470 Philosophy of Recreation (2) Fall, Spring
Interpretation of recreation as basic part of living process; its importance in individual, community and national life; its social and economic significance; the growing importance of leisure time problems.

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

522 Seminar: Recreation in Public Education (2) Spring
Prerequisite: Graduate standing or consent of instructor. Uses of educational resources for recreation and community living. The after school program, summer programs, school camping, outdoor education, and adult education.

524 Seminar in Current Problems in Recreation (2) Fall
Prerequisite: Graduate standing or consent of instructor. Consideration of current problems in recreation through analysis of current literature, workshop and institute proceedings, and research findings.

532 Construction and Maintenance of Parks, Playgrounds, and Recreation Facilities (2) Fall
Prerequisite: Graduate standing or consent of instructor. Standards for site selection, development, facilities, and equipment; operation and maintenance of buildings and grounds.

542 Recreation for Special Groups (2) Spring
Prerequisite: Graduate standing or consent of instructor. Knowledge and technique necessary for initiating a recreation program of rehabilitation for mentally and physically ill or handicapped.

562 Surveys and Planning in Recreation (2) Fall
Prerequisite: Graduate standing or consent of instructor. Planning for recreation services and facilities based on studies and surveys. Scope, content, objectives, procedures, and types of recreation surveys.

564 Legal and Financial Aspects of Recreation (2) Spring
Prerequisite: Graduate standing or consent of instructor. Interpretation of state statutes affecting recreation. Special attention to contractual agreements, leases, and torts. Analysis of fundamental principles and rules governing public recreation finance.

566 Seminar in Administration of Public Recreation (2) Spring
Prerequisite: Graduate standing or consent of instructor. Analysis of administrative duties and responsibilities, and suggested approaches and methods of administration that have been proved by actual experience.

582 Research, Measurement and Evaluation in Recreation (2) Spring
Prerequisite: Graduate standing or consent of instructor. Review of various community research investigations in recreation; analysis of measurements used in the investigations and evaluation of the results obtained. Using the data presented in the course, the student will have the opportunity to engage in action research.

598 Directed Field Work in Recreation (3-6) Fall, Spring
Required of candidates who have not had two years of supervisory or administrative experience in the field of recreation. Experiences which will be accepted in lieu of this requirement must be determined by the department.

599 Graduate Project (3) Fall, Spring

RUSSIAN

(In the Division of Language Arts)

STAFF: Griessbach.

Courses leading to a major or a minor in Russian are not offered at the present time. Lower division Russian may be elected by students who seek a reading knowledge or who are interested in learning the language for other reasons.

Students entering Los Angeles State College from high school with four years of high school Russian are permitted to register in Russian 200B; those entering with three years, in Russian 200A; those with two years, enter Russian 100B; those with one year or less, enter Russian 100A.

COURSES OF INSTRUCTION

100A Elementary Russian I (4)

Methodical presentation of the basic communication skills.

100B Elementary Russian II (4)

Prerequisite: Russian 100A. Aims to increase proficiency in understanding, speaking, reading and writing Russian.

150 Basic Patterns in Russian (3) (General Education)

No prerequisite. A beginning course to enable the student to carry on practical conversations in ordinary daily activities. Study of patterns of phonology, structure, and vocabulary as related to the history, culture, and psychology of the people who use the language. Vocabulary building; ear training; pronunciation.

200A Intermediate Russian I (4)

Prerequisite: Russian 100B or equivalent. Endeavors to make the student more secure in his use of Russian. Training in reading and speaking with ease; writing simple Russian.

200B Intermediate Russian II (4)

Prerequisite: Russian 200A or equivalent. Aims to make the student read and speak Russian fluently and to write simple Russian.

SOCIAL SCIENCE

(In the Division of Social Sciences)

STAFF: Potter (Adviser). Faculty from the Division of Social Sciences.

BACHELOR'S DEGREE CURRICULA

Major in Social Science

The purpose of the social science major is to provide a liberal education with main emphasis in the social sciences.

Lower Division

21 units including general education social science courses approved by adviser, with at least 3 units in each of the following fields: anthropology, economics, geography, government, history, sociology.

Upper Division

30 units as follows:

a. Social Science 450—Scientific Method and Applied Logic (3)

b. 15 units of approved courses in one social science field, and 6 units in two other social science fields from the following: anthropology, economics, geography, government, history, philosophy, social psychology, sociology.

General Secondary Teaching Major in Social Studies

The major in *social studies* has been designed for students who have chosen social studies as their teaching major for the general secondary credential. Students completing this major will be prepared to teach the social sciences commonly taught in the junior and senior high schools of California. See also pages 140-141 for professional education requirements. A teaching minor in a different teaching field is also required for the general secondary credential. Students undertaking the social studies teaching major or minor must have the approval of the social studies adviser before taking upper division courses to fulfill the major or minor requirements. Social studies majors are not required to take History 250 to meet the general education history requirement.

Lower Division

Government 150—Government and American Society	3 units
History 101AB—Man in Civilization	6 units
History 202AB—American Civilization	6 units
Psychology 150—Human Behavior	3 units
Geography 150—Human Geography	3 units
Geography 160—Physical Geography	3 units
Sociology 250—Man and Society *or* Anthropology 250—Cultural Anthropology	3 units
Economics 201—Introduction to Economic Analysis	3 units

Upper Division

Approved courses in the following areas:

Geography (Regional or Systematic)	3 units
Government	
American Structural	3 units
Theoretical-Legal	3 units
History	
American (Period)	3 units
American (Topical)	3 units
Other	3 units
Sociology-Anthropology-Social Psychology	3 units
Economics	3 units
	54 units

Graduate Year

Social Science 550A—Seminar in Social Science	3 units
Approved "500" social science course	3 units
	60 units

SUGGESTED COURSE SEQUENCE FOR SOCIAL STUDIES MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Govt. 150—Govt. and Am. Soc.	3	Hist. 101B—Man in Civil.	3
Hist. 101A—Man in Civil.	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Psych. 150—Human Behavior	3
†Engl. 150—Written Expr. *or* Lang. Arts 150A	3	Phil. 150—Phil. Ideas	3
Phys. Educ. 150	1	†Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Elective	2	Phys. Educ. elective	1

SOPHOMORE YEAR

Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Soc. 250—Man and Society	3
Art 150—Art, Music, Dance	3	Geog. 150—Human Geog.	3
Anthr. 250—Cultural Anthro.	3	Hist. 202B—Am. Civil	3
Hist. 202A—Am. Civil	3	Econ. 201—Intro. to Econ. Anal.	3
Engl. 250—Underst. Lit.	3	Geog. 160—Phys. Geog.	3

JUNIOR YEAR

Ed. 300—Intro to Cred. Prog.	0	Geography course	3
Ed. 413—Psych. and Sociol.	5	Teaching minor	3
Teaching minor	3	Government course	3
History course (Am.)	3	Ed. 471—Sec. Educ.	5
Soc.-Anth.-Soc. Psych. course	3	Elective	2
H. & S. 350—Personal Health	2		

SENIOR YEAR

Ed. 480—Coun. and Guid.	2	Ed. 493—Methods	2
Ed. 490—Audio Vis. Instr.—Meths. and Techniques	2	Teaching minor	6
Teaching minor	6	Economics course	3
History course	3	History course	3
Government course	3	Elective	2

GRADUATE YEAR

First semester	*Units*	*Second semester*	*Units*
Ed. 493—Methods (Minor)	2	Ed 442Z—Dir. Teach.	3
Ed. 442Y—Dir. Teach.	3	Ed. 444Z—Pblms. in Sec. Teach.	2
Ed. 444Y—Pblms. in Sec. Teach.	1	500 Soc. Sci. course	3
Soc. Sci. 550A—Sem. in Soc. Sci.	3	Elective	7
Elective	3-0		
Teaching minor	3-6		

General Secondary Teaching Minor in Social Studies

See also pages 140-141 for professional education requirements. A teaching major in a different teaching field is also required for the general secondary credential.

Lower Division

12 units of approved courses from three of the following fields: economics, geography, government, history, philosophy, sociology-anthropology.

Upper Division

12 units of approved courses from three of the following fields (at least nine units in the lower and upper division combined must be in one field): anthropology-sociology, social psychology, economics, geography, government, history, philosophy.

MASTER OF ARTS DEGREE

The master of arts degree in social science is designed primarily for teachers of the social studies in the high schools and junior high schools of California. The program consists primarily of advanced work in social science fields commonly taught in these schools.

1. Prerequisite: 24 upper division units in at least four social science fields.
2. Area of Concentration:
   a. Social Science 550AB—Seminar in Social Science — 6 units
   b. Approved "500" courses from two of the following fields: economics; geography; government; history; sociology - anthropology - social psychology — 6 units
   Approved graduate project not to exceed three units may be included.
   c. Other approved courses in the social sciences — 12 units
   d. Comprehensive written examination in the composite social science field, and in two social science fields designated when the program is made out.
3. Approved courses outside the area of the social sciences — 6 units

30 units

COURSES OF INSTRUCTION

Prerequisites: Completion of two introductory courses in the social sciences.

450 Scientific Method and Applied Logic (3) Fall, Spring

Nature and application of logic, in its relations to the social sciences. Special attention to the foundation in logic of the methods of scientific inquiry.

469 Contemporary Latin America (3) Fall

Introduction to the Latin American world through study of the contemporary scene and its literature. Recent economic, political, cultural, and social developments. Opportunity to read sources in Spanish and Portugese.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and superior academic performance in the social sciences.

550A-B Seminar in Social Science (3-3) Fall, Spring

Interdisciplinary approach to selected problems, regions, or trends; directed by the staff of the division.

SOCIOLOGY AND ANTHROPOLOGY

(In the Division of Social Sciences)

STAFF: Hager (Department Head), Baily, Diehl, Eberhart, Ewald, Faron, Fulton, Geis, Loether, Nahrendorf, Penchef, Rowan, Thomlinson, Wallace.

BACHELOR'S DEGREE CURRICULUM

Major in Sociology

The sociology major leads to a bachelor's degree in sociology with emphasis on (1) general sociology or (2) social welfare. The major program prepares the student for graduate study in the field of sociology or social welfare and qualifies a student for employment in (a) certain areas of social welfare service, (b) correctional and probational services, and (c) as technician or research specialist in university, public, or private research facilities.

Lower Division

Sociology 201—Introductory Sociology	3 units
Sociology 202—Introductory Sociology	3 units
Sociology 210—Elementary Social Statistics	3 units

Upper Division

A. Core requirements (regardless of option selected all students must complete the core requirements)

Sociology 412—Development of Sociology	3 units
Sociology 414—Contemporary Sociological Theory	3 units
Sociology 490—Methods of Social Research	3 units

B. Option requirements (select option 1 or 2)

OPTION 1—GENERAL SOCIOLOGY

Select *one* course from each of the following groups .... 12 units

1. Sociology 330—Urban Sociology (3)
   Sociology 434—Population and World Resources (3)
   Sociology 448—Social Stratification (3)
2. Sociology 422—Social Psychology (3)
   Sociology 424—Mass Communication and Public Opinion (3)
   Sociology 426—Sociopathic Behavior (3)
3. Sociology 440—Marriage and the Family (3)
   Sociology 442—Social Change (3)
   Sociology 444—Social Control (3)
   Sociology 446—Industry and the Social Order (3)
4. Anthropology 401—Culture Areas of the World (3)
   Anthropology 405—Culture and Personality (3)
   Sociology 460—Intergroup Relations and Social Conflict (3)

Courses in allied fields, or in sociology, chosen with approval of an adviser .... 9 units

OPTION 2—SOCIAL WELFARE

Sociology 440—Marriage and the Family	3 units
Sociology 470—The Field of Social Work	3 units
Sociology 472—Community Organization *or* Sociology 330—Urban Sociology	3 units
Sociology 474—Methods of Social Work	3 units
Sociology 476—Child Welfare	3 units
Sociology 478—Social Legislation	3 units
Sociology 480—Criminology *or* Sociology 482—Juvenile Delinquency	3 units
Courses in allied fields, or in sociology, chosen with the approval of an adviser	6 units
Total option 1	39 units
Total option 2	45 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR SOCIOLOGY MAJOR

Option 1—General Sociology

First semester	*Units*	*Second semester*	*Units*
FRESHMAN YEAR			
‡Engl. 150—Written Expr. *or* Lang. Arts 150A	3	‡Sp. 150—Oral Expr. *or* Lang. Arts. 150B	3
Govt. 150—Govt. & Am. Soc.	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Psych. 150—Human Behavior	3
Phys. Educ. 150	1	*Geog. 150—Human Geog.	3
Elective	3	Phys. Educ. elective	1
*Anthro. 250—Cult. Anthro.	3	Elective	3
SOPHOMORE YEAR			
Socio. 201—Intro. Soc.	3	Soc. 202—Intro. Soc.	3
Hist. 250—U. S. History	3	Soc. 210—Elem. Soc. Statis.	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Engl. 250—Underst. Lit.	3
Phil. 150—Phil. Ideas	3	Art 150—Art, Music, Dance	3
Elective	3	*Econ. 201—Econ. for Citizen	3
JUNIOR YEAR			
Soc. 412—Develop. of Soc.	3	Soc. 414—Contemp. Soc. Theory	3
Soc. 448—Soc. Strat.	3	Soc. 460, 434, *or* Anthro. 401, 405	3
Soc. Sci. 450—Logic	3	Geog. 481—Political Geog.	3
H&S 350—Personal Health	2	Hist. 477—Social Hist. of U. S.	3
Electives	5	Elective	3
SENIOR YEAR			
Soc. 490—Meth. of Soc. Resear.	3	Soc. 426—Socio. Behavior	3
Soc. 422—Soc. Psych. *or* Soc. 440—Marriage & Fam.	3	Soc. 442—Social Change *or* Soc. 424—Mass Comm. & Pub. Opin.	3
Econ. 412—Develop. of Econ. Thought	3	† Soc. 411—Soc. Statis.	3
Psych. 308—Contemp. Psych.	3	Hist. 476—Econ. Hist. of U. S.	3
Gen. Educ. elective	3	Electives	4

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* Recommended.

† Prerequisite: Sociology 210 or equivalent. Recommended for all majors planning graduate study.

‡ See "Note" on page 55.

Option 2—Social Welfare

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
‡Engl. 150—Written Expr. *or* Lang. Arts 150A	3	‡Sp. 150—Oral Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. & Am. Soc.	3	Psych. 150—Human Behavior	3
Phys. Educ. 150	1	Geog. 150—Human Geog.	3
Elective	3	Elective	3

SOPHOMORE YEAR

Soc. 201—Intro. Socio.	3	Soc. 202—Intro. Soc.	3
Hist. 250—U. S. History	3	Soc. 210—Elem. Soc. Statis.	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Engl. 250—Underst. Lit.	3
Phil. 150—Phil. Ideas	3	Art 150—Art, Music, Dance	3
Elective	3	Elective	3

JUNIOR YEAR

Soc. 412—Develop. of Soc.	3	Soc. 414—Contemp. Soc. Theory	3
Soc. 470—Field of Soc. Wk.	3	Soc. 330—Urban Sociology *or* Soc. 472—Commun. Org.	3
Soc. 440—Marriage & Fam.	3	Soc. 434—Pop. & Wrld. Res. *or* Soc. 448—Soc. Stratification	3
Soc. Sci. 450—Logic	3	Elective	3-5
H&S 350—Personal Health	2	Anthro. 405—Cult. & Person.	3
Elective †	1-3		

SENIOR YEAR

*Soc. 474—Methods of Soc. Wk.	3	*Soc. 490—Methods of Soc. Research	3
*Soc. 478—Soc. Legislation	3	*Soc. 480—Criminology *or* Soc. 482—Juvenile Delinq.	3
*Soc. 476—Child Welfare	3	Soc. 426—Socio. Behavior	3
Psych. 308—Contemp. Psych.	3	Govt. 468—Publ. Welf. Adm.	3
Gen. Educ. elective	3	Elective	3

MASTER OF ARTS DEGREE

The master of arts degree in sociology provides advanced study in sociology and related fields for students teaching in this field and for those desiring the opportunity for advanced study in sociological theory and research.

The master of arts program in sociology provides training in eight fields of study: (1) the history and theory of sociology; (2) social research; (3) social welfare and corrections; (4) intergroup relations, race and culture; (5) social psychology and sociopathic behavior; (6) social institutions and social change; (7) population, urban and industrial sociology; (8) criminology and delinquency. A comprehensive examination is required of all candidates. All candidates must take examinations in areas (1) and (2); the candidate may then select any three areas from the remaining six to complete examination requirements.

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* Recommended.

† Social welfare majors should consider, when appropriate, Sociology 396, Inservice Training, and Sociology 398—Work-Study.

‡ See "Note" on page 55.

1. Prerequisite: A minimum of 15 units of undergraduate preparation in sociology, including completion of core requirements or their approved equivalents.
2. Areas of Study:
    - a. Required courses .... 9 units
        Sociology 505—Seminar in the History and Theory of Sociology (3)
        Sociology 514—Studies in Contemporary Sociology (3)
        Sociology 590—Social Research (3)
    - b. Approved graduate (500) courses in the field of sociology .... 6 units
        A master's thesis is *optional;* if option is chosen, the student will receive 3 units credit. Course designation for the option is Sociology 599.
    - c. Approved courses in sociology, must be upper division (400) courses 9 units
3. Comprehensive written examinations in selected fields of sociology. All candidates must take the comprehensive examination.
4. Courses in allied fields chosen with approval of an adviser .... 6 units

30 units

COURSES OF INSTRUCTION

ANTHROPOLOGY

(No Major Is Offered)

Lower Division

201 Physical Anthropology (3) Fall, Spring
The origins and antiquity of man; man's place in nature; the fossil record; racial criteria and the classification of races; genetics and modern racial classification; some problems of human variability.

202 European Prehistory (3) Spring
The growth of culture from the earliest beginnings to the emergence of the great civilizations, utilizing the concepts, methods and data of archeology. Primary focus is on Europe and adjacent areas.

230 Cultural Anthropology (3) (General Education) Fall, Spring
Exploration of the concept of culture; problems of definition; the evolution of cultural systems; application of the concept of culture to the analysis of selected problems confronting contemporary civilization.

Upper Division

Prerequisite: Cultural Anthropology or consent of instructor.

401 Culture Areas of the World (3) Fall, Spring
Principal culture types and their distribution in the world; ethnological surveys and problems.

405 Culture and Personality (3) Fall, Spring
Individual personality development and the cultural milieu. Recent work in the co-ordination of psychodynamics and the social sciences. Special attention to studies of child training and culture patterns in several non-Western cultures.

406 Indians of North America (3) Spring
Problems and methods of investigating the history of North American peoples before European discovery. Prehistoric culture areas; their relationship with Indians of historic and present times.

407 Indians of California and the Southwest (3) Fall
Origins, modes of subsistence, social organization, and geographic and historical relationships.

408 Middle America (3) Fall
Indian civilizations of Mexico, Central America, and the West Indies, folk cultures of the peoples who currently inhabit these areas.

410 Primitive Social Organization (3) Fall, Spring
Inquiry into the nature of primitive social systems; the origin and function of primitive kinship, social, and territorial units; primitive social institutions and social controls; religion, law, political and economic organization.

412 Primitive Religion (3) Fall, Spring
The study of the origins, elements, forms and symbolism of religion. A cross-cultural analysis of the role and functions of religion as a universal ingredient in human society.

438 Peoples of Africa (3) Fall, Spring
Negroid Africa, past and present; social change, Western and Asiatic influences.

447 Peoples of the Pacific (3) Spring
The aboriginal civilizations of Malaysia and the Pacific Islands before and during modern European contact.

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of the instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

SOCIOLOGY

Lower Division

201 Introductory Sociology (3) Fall, Spring
The subject matter of sociology; sociological perspective and its distinctive contribution to the understanding of social life; social relationships and processes central to sociological inquiry; social order, socialization, culture, group processes, and social change.

202 Introductory Sociology (3) Fall, Spring
American social patterns, norms, and institutions; social characteristics and resources; institutional patterns—family, economic, industrial, political, religious, and educational; major American value orientations; mobility, stratification, role conflict, and institutional change.

210 Elementary Social Statistics (3) Fall, Spring
Statistical methods commonly used in the social sciences. Statistical presentation; tables, charts, measures of central value; sampling design and distributions; statistical inference; fundamentals of correlation and research design.

250 Man and Society (3) Fall, Spring (General Education)
Sociological approach to broad problems that confront modern man. Through the use of selected concepts in sociology, an attempt is made to familiarize the student with the social structure and social processes of our national life and of society in general with the aim of encouraging and achieving intellectual clarity in assessing social issues and trends.

Upper Division

Prerequisite: One year of college sociology or consent of instructor. Exception: No prerequisite for Sociology 330.

330 Urban Sociology (3) Fall, Spring
The urban community and urbanization. Urban areas, institutions, values, and problems. Social and demographic characteristics. Urban change and planning.

396 In-service Training (Variable credit) Fall, Spring
In-service training for social service personnel in local, state, and federal agencies. Conferences and field supervision.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under work-study or internship programs. Analysis and reports of the student's performance; group meetings.

411 Social Statistics (3) Spring
Prerequisite: Sociology 210 or equivalent. Recommended for all sociology majors planning graduate study. Specialized treatment of probability and sampling; prediction and correlation; the analysis of variance and covariance; experimental design.

412 Development of Sociology (3) Fall, Spring
Historical and analytical consideration of the contributions of social philosophy and the social and natural sciences to the development and growth of sociology.

414 Contemporary Sociological Theory (3) Fall, Spring
Survey of sociological theory with emphasis on twentieth-century contributions. The status of sociological inquiry and theory. Relationship of sociology to such allied fields as anthropology, psychology, economics, education, and political science. Trends in applied sociology.

422 Social Psychology (3) Fall, Spring
Inquiry into the social and psychological dimensions of group behavior. Group structures and psychological manifestations. Social interaction and its impact on the individual and personality formation.

424 Mass Communications and Public Opinion (3) Fall, Spring
Sociology of communications. Inquiry into mass culture, propaganda, public opinion, ideologies, and public sentiment, and their relationship to social structure. Analysis of techniques and forces used to shape or alter public opinion and social values.

426 Sociopathic Behavior (3) Fall, Spring
Social and personal disorganization treated as a consequence of role conflict, social conflict, competition and normlessness. Impact of group structure on individual and social deviance.

434 Population and World Resources (3) Spring
Analysis of causes and consequences of major population trends throughout the world; changes in birth and death rates, sex ratio, age distributions, race and nationality composition; marital, educational, and occupational status; population density, world resources, and underdeveloped countries.

440 Marriage and the Family (3) Fall, Spring
The family as a social institution. Historical and cross-cultural perspectives; social change affecting marriage and family; analysis of American courtship and marriage patterns; the psychodynamics of family life.

442 Social Change (3) Spring
Sources of change in societies; theories of social change and interpretation of social trends; social change and problems of under-developed countries; the dynamics of planned change.

444 Social Control (3) Fall
Nature of social controls and their classification. Agencies of social control with special reference to controls in society, culture, law, religion, education, family and the economy. Relationship of social control to social change.

446 Industry and the Social Order (3) Fall
The social setting of modern industry. Problems in industrialization. Theories of industry and unionism. Work satisfactions, job morale and security, collective bargaining, automation; problems in manpower and economic modernization.

448 Social Stratification (3) Fall, Spring
Inquiry into the nature, theory, and functions of social stratification. Criteria of social stratification, social differentiation, status, and role. Indices of class position, class interests; social class and socialization. Trends in occupational mobility. Comparative systems of stratification.

460 Intergroup Relations and Social Conflict (3) Fall, Spring
Minority groups and movements. Theory and practice of intergroup relations; civil rights and equality of opportunity in education, employment, housing, etc; theories of social conflict and the role of conflict in the democratic society.

470 The Field of Social Work (3) Fall, Spring
Development of American social work; the scope, diversity, and efficacy of welfare programs designed to meet welfare problems in contemporary society.

472 Community Organization (3) Fall, Spring
Community development, structure, and organization; community problems; modern community services–government, planning, schools, welfare and health services; co-ordination of community resources.

474 Methods of Social Work (3) Fall, Spring
Theories, principles and practices, of social casework in group, medical, and psychiatric settings. Discussion of case work concepts, literature, and case materials directed toward the development of skills in social welfare work.

476 Child Welfare (3) Fall, Spring
Trends affecting growth and change in establishing the rights of children to care and protection. Emphasis on the child and the law; compulsory education, school social work, child labor legislation; institutional and foster care; adoption procedures; problems of troubled children.

478 Social Legislation (3) Fall, Spring
Study of social, legal, and legislative processes used to establish and maintain the general welfare; relationship between social values and social legislation; family, child, and labor legislation; public assistance and social security; future directions in social legislation.

480 Criminology (3) Fall, Spring
Criminal law, crime, and deviance. Social and psychological factors in criminal behavior; criminal law and criminal justice; prevention and control; trends in theory and correctional procedures.

482 Juvenile Delinquency (3) Fall, Spring
Extent and distribution of delinquency with emphasis on the local area. Meaning, implications, and treatment of delinquent behavior. Personal and environmental conditioning factors; delinquency and the rights of children.

484 Contemporary Treatment of Law Violators (3) Spring
Survey of procedures used in processing the offender; from arrest, through trial, to prison and probation. The social aspects of these procedures evaluated with regard to contemporary theories of criminality and rehabilitation.

490 **Methods of Social Research** (3) Fall, Spring
Prerequisites: Sociology 210 or Sociology 434 or equivalent. Application of scientific method to social data; research design and procedures; schedule construction, scaling techniques, quantitative and qualitative case analysis; designs of proof.

499 **Independent Study** (1-3) Fall, Spring
Prerequisites: Consent of instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and superior performance in sociology.

505 **Seminar in the History and Theory of Sociology** (3)
Historical dimensions, European and American, of the development of systematic sociological theory and method. Continuity and critique of the major contributions to theories of society and the social processes. Required for the M.A. degree in sociology.

510 **Social Statistics** (3)
Advanced statistical methods. Statistical inference, variance and covariance, micro-statistics, nonparametric statistics; randomization tests, ranking methods, factorial experimentation; probabilities and deterministic models.

514 **Studies in Contemporary Sociology** (3)
Exploration and critique of the problems, methods, and theories, characteristic of contemporary sociological inquiry; their relationship and contribution to the advancement of sociological theory and its application to selected social problems. Required for the M.A. degree in sociology.

522 **Seminar in Social Psychology** (3)
Analysis and critique of modern approaches to and investigations of the social processes that interrelate individuals and groups.

534 **Seminar in Population Problems and Urbanization** (3)
Problems in population growth, urbanization, and industrialization; social and psychological factors in population dynamics; advanced methods of population analysis; population, planning, national resources, and public policy.

540 **Seminar in Marriage and the Family** (3)
Advanced study of the socio-psychodynamics of marriage and the family; emphasis on recent research regarding family change, parent-child relationships, and family instability, successful family life.

570 Studies in Social Welfare and Corrections (3)
Advanced study of individual and group phenomena as related to specific phases of social welfare and corrections on the local, state, and federal level. Field studies and class planning based on the student's interest in his field of study or employment.

580 Seminar in Criminology (3)
Advanced study of relationship between criminal behavior, social deviance, and social structure; contemporary criminality and criminal justice; comparative studies of criminal justice, criminal codes; legal, medical, and psychiatric interpretation of criminal behavior.

590 Social Research (3)
Advanced study of social research techniques and design. Supervised application of research methods to laboratory or field study situations; survey procedures. Required for the M.A. degree in sociology.

599 Graduate Project (1-4)
Variable credit; to be used for special graduate projects or by those students electing to write a master's thesis in sociology.

SPANISH

(In the Division of Language Arts)

STAFF: Bonhard, Lionetti, Schwartz.

Spanish is offered to students seeking baccalaureate degrees and to those seeking secondary teaching credentials. Lower division courses may also be used to fulfill requirements or recommendations of other departments in the college.

Students entering Los Angeles State College from high school with two years of Spanish should register in Spanish 100B; those entering with three years, in Spanish 200A; those with four years, in Spanish 200B. Full-year courses in Spanish completed in high school may not be repeated for graduation credit except the last year taken in high school.

BACHELOR'S DEGREE CURRICULUM

Major in Spanish

Designed for students who elect to study Spanish as a non-teaching major.

Lower Division

Spanish 100AB–Elementary Spanish	8 units
Spanish 200AB–Intermediate Spanish	8 units

Upper Division

Spanish 400–Problems of Syntax I	3 units
Spanish 401–Problems of Syntax II	3 units
Spanish 402–Spanish Literature from the Beginnings through the Renaissance	3 units
Spanish 403–Spanish Literature of the Golden Age and the Eighteenth Century	3 units
Spanish 404–Nineteenth Century and the Romantic Movement in Spain	3 units
Spanish 405–Nineteenth Century Realism, and Contemporary Literature	3 units
Electives chosen from the following courses	6 units

- Spanish 300–Conversation and Composition (3)
- Spanish 301–Advanced Oral and Written Composition (3)
- Spanish 420–Spanish-American Literature to 1888 (3)
- Spanish 421–Spanish-American Literature from 1888 (3)

36–40 units

General Secondary Teaching Major

See also pages 140-141 for professional education requirements. A teaching minor in a second teaching subject is also required for the general secondary credential.

Lower Division

Spanish 100AB–Elementary Spanish	8 units
Spanish 200AB–Intermediate Spanish	8 units

Upper Division

Spanish 300—Conversation and Composition	3 units
Spanish 301—Advanced Oral and Written Composition	3 units
Spanish 400—Problems of Syntax I	3 units
Spanish 401—Problems of Syntax II	3 units
Spanish 402—Spanish Literature from the Beginnings through the Renaissance	3 units
Spanish 403—Spanish Literature of the Golden Age and the Eighteenth Century	3 units
Spanish 404—Nineteenth Century and the Romantic Movement in Spain	3 units
Spanish 405—Nineteenth Century Realism and Contemporary Literature	3 units

Graduate (Fifth Year)

Spanish 420—Spanish-American Literature to 1888	3 units
Spanish 421—Spanish-American Literature from 1888	3 units
	42-46 units

General Secondary Teaching Minor

See also pages 140-141 for professional education requirements. A teaching major in a second teaching subject is also required for the general secondary credential.

Lower Division

Spanish 200AB—Intermediate Spanish	8 units

Upper Division

Spanish 300—Conversation and Composition	3 units
Spanish 301—Advanced Oral and Written Composition	3 units
Electives chosen from the following courses	6 units
Spanish 402—Spanish Literature from the Beginnings through the Renaissance (3)	
Spanish 403—Spanish Literature of the Golden Age and the Eighteenth Century (3)	
Spanish 404—Nineteenth Century and the Romantic Movement (3)	
Spanish 405—Nineteenth Century Realism and Contemporary Literature (3)	
	20 units

COURSES OF INSTRUCTION

All upper division courses are conducted in Spanish.

100AB Elementary Spanish (4-4)

Methodical presentation of the basic communication skills of simple, standard Spanish; ear training; conversation; simple written expression; reading for comprehension; vocabulary building; pronunciation drill under supervision in Language Laboratory. Second semester increases proficiency in understanding, speaking, reading, and writing Spanish.

150 Basic Patterns in Spanish (3) (General Education)

Beginning course to enable the student to carry on practical conversations in ordinary daily activities. Study of patterns of phonology, structure, and vocabulary as related to the history, culture, and psychology of the people who use the language. Vocabulary building; ear-training; pronunciation.

200A Intermediate Spanish (4) Fall

Prerequisite: Spanish 100AB or equivalent. Emphasis on understanding and speaking Spanish. Reading and writing of simple Spanish.

200B Intermediate Spanish (4) Spring

Prerequisite: Spanish 200A or equivalent. Rapid reading of Spanish for comprehension; writing; continued emphasis on understanding and speaking. Grammar review.

300 Conversation and Composition (3)

Prerequisite: Spanish 200AB or equivalent. Emphasis on the use of idioms—spoken and written; the increase of vocabulary; the reading of contemporary Spanish prose.

301 Advanced Oral and Written Composition (3)

Prerequisite: Spanish 200AB or equivalent. A review of grammar as used for communication skills; the writing of current Spanish; drill in more difficult patterns of speech.

400 Problems of Syntax I (3)

Prerequisite: Spanish 200AB or equivalent. Intensive study of the Spanish verb; original written composition; translation of contemporary English or American short stories.

401 Problems of Syntax II (3)

Prerequisite: Spanish 200AB or equivalent. Intensive study of Spanish grammar in preparation for teaching; original oral composition; translation of contemporary English or American short stories.

402 Spanish Literature From the Beginnings Through the Renaissance (3) Offered alternate years

Prerequisite: Spanish 200AB or equivalent. The Spanish epic; lyric poetry; the great satirists; the novels of chivalry; the Romances; humanism in Spain.

403 Spanish Literature of the Golden Age and the Eighteenth Century (3) Offered alternate years

Prerequisite: Spanish 200AB or equivalent. Representative writers of the Spanish theater; Don Quixote and other writings by Cervantes; the picaresque novel; other satirists; Gongorism and lyric poetry; decline of the eighteenth century.

404 Nineteenth Century and the Romantic Movement in Spain (3) Offered alternate years

Prerequisite: Spanish 200AB or equivalent. Romanticism in the theater and lyric poetry; the costumbristas.

405 Nineteenth Century Realism and Contemporary Literature (3) Offered alternate years

Prerequisite: Spanish 200AB or equivalent. Great novelists of nineteenth century; Generation of '98; theater in twentieth century; new poetry; contemporary outlook.

420 Spanish-American Literature to 1888 (3)
Prerequisite: Spanish 200AB or equivalent. Study of first chroniclers of Spanish-America; the Colonial Period; patriotic writers of Independence; Romanticism.

421 Spanish-American Literature From 1888 (3)
Prerequisite: Spanish 200AB or equivalent. The modernista movement; costumbristas of Spanish-America; the novel of social import; the theater; contemporary Spanish-American thought.

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings regularly held.

SPEECH AND DRAMA

(In the Division of Language Arts)

STAFF: Stansell (Department Head), Altenberg, Beaver, Campbell, Cathcart, Chase, Cullen, Daniel, DeLay, Douglass, Fitzpatrick, Gardemal, Gillen, Hillbruner, Holladay, Hollis, Huber, Kully, L. Scott, Smith, Ubans, Young.

BACHELOR'S DEGREE CURRICULA

Major in Speech

Designed for students who (1) elect to study the liberal arts with an emphasis in speech, or (2) plan to pursue careers in which skill in public speaking is essential.

Lower Division

Speech 160—Public Speaking	3 units
Speech 161—Argumentation	3 units

Upper Division

Speech 400—Group Discussion	3 units
Speech 411—Persuasive Speaking	3 units
Speech 420—Oral Interpretation	3 units
Speech 467—History of Public Address	3 units
Speech 468—Speech Analysis and Evaluation	3 units
Speech 397Y—Forensics	3 units
Select from the following	8–9 units

- Speech 431—American Phonetics (2)
- Speech 432—Voice Science (2)
- Speech 434—Introduction to Speech Correction (3)
- Speech 397Z—Forensics (3)
- American Studies 402—Ideas in America (3)
- English 405—Linguistic Science and Modern English Grammar (3)
- Psychology 420—Human Communication (3)
- Social Science 450—Scientific Method and Applied Logic (3)

32–33 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR SPEECH MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
†Sp. 150—Oral Expr. *or* Lang. Arts 150A	3	†Engl. 150—Written Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. and Am. Soc.	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, Dance	3	Phys. Educ. elective	1
Phys. Educ. 150	1	Elective	6
Elective	3		

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† Sp. 150 and Engl. 150 in either order make a sequence; Lang. Arts 150A and B make a separate sequence. Lang. Arts 150A *or* B may *not* be combined with Engl. 150 or Sp. 150.

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
Sp. 160—Pub. Speak.	3	Sp. 161—Argumentation	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	Gen. Educ. Soc. Sci. elective	3
Phil. 150—Phil. Ideas	3	Hist. 250—U. S. History	3
Engl. 250—Underst. Lit.	3	Sp. 197X—Forensic Activity *	1
Sp. 197W—Forensic Activity *	1	Electives	5
Electives	3		

JUNIOR YEAR

Sp. 397Y—Forensics	3	Sp. 400—Group Discussion	3
Sp. 420—Oral Interpr.	3	Sp. 467—Hist. of Pub. Addr.	3
H&S 350—Personal Health	2	Electives	9
Gen. Educ. elective	3		
Electives	5		

SENIOR YEAR

Sp. 411—Persuasive Spk.	3	Speech or related electives	6
Sp. 468—Sp. Anal. and Eval.	3	Electives	9
Gen. Educ. elective	3		
Speech and related electives	3		
Elective	3		

Major in Drama

Designed for students who (1) elect to study the liberal arts with an emphasis in drama, or (2) plan to engage in professional work on the stage, screen, or television, or in careers in which skill in dramatic art is essential.

Lower Division	
Speech 162—Acting Fundamentals	3 units
Speech 170—Analysis of Drama	3 units
Speech 172—Beginning Stagecraft	3 units
Upper Division	
Speech 313Y—Theatrical Make-up	2 units
Speech 412Y—Advanced Acting	3 units
Speech 420—Oral Interpretation	3 units
Speech 440Y—Principles of Directing	3 units
Speech 443—History of the Theater	3 units
Speech 473—Stage Scenery	3 units
Speech 396W—Play Production	3 units
Select *one* course from the following English 424—Greek and Roman Drama (3) English 425—Modern Continental Drama (3) English 426—Modern British Drama (3) English 427—Modern American Drama (3)	3 units
Select *two* courses from the following Speech 313Z—Theatrical Make-up (2) Speech 412Z—Advanced Acting (3) Speech 440Z—Principles of Directing (3) Speech 442Y—Playwriting (3) Speech 445—Television Techniques (3) Speech 470—Stage Lighting (3) Speech 479—Stage Costuming (3) English 417—Interpreting Shakespeare (3) American Studies 402—Ideas in America (3)	5-6 units
	37-38 units

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* Recommended.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR DRAMA MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Sp. 170—Anal. of Drama	3	Sp. 172—Begin. Stagecraft	3
*Sp. 150—Oral Expr. *or* Lang. Arts 150A	3	*Engl. 150—Written Expr. *or* Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Govt. 150—Govt. and Am. Soc.	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, Dance	3	Phys. Educ. elective	1
Phys. Educ. 150	1	Elective (Recommended: Sp. 160)	3

SOPHOMORE YEAR

Sp. 162—Acting Fundament.	3	Gen. Educ. Soc. Sci. elective	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	H&S 350—Personal Health	2
Phil. 150—Phil. Ideas	3	Hist. 250—U. S. History	3
Engl. 250—Underst. Lit.	3	Electives	6
Elective	3	Elective (Recommended: Sp. 196W)	1
Elective (Recommended: Sp. 195W)	1		

JUNIOR YEAR

Sp. 396W—Play Production	3	Sp. 420—Oral Interpret.	3
Sp. 412Y—Advanced Acting	3	Speech or related electives	6
Gen. Educ. elective	3	Electives	6
Electives	7		

SENIOR YEAR

Sp. 440Y—Prin. of Direct.	3	Sp. 443—Hist. of Theater	3
Sp. 473—Stage Scenery	3	Speech or related electives	3
Gen. Educ. elective	3	Electives	9
Electives	6		

Major in Speech Correction

Designed for students who plan to engage in clinical speech correction in nonacademic programs.

Lower Division

Speech 160—Public Speaking	3 units
Speech 165—Voice and Diction	2 units

Upper Division

Speech 431—American Phonetics	2 units
Speech 432—Voice Science	2 units
Speech 434—Introduction to Speech Correction	3 units
Speech 435Y—Advanced Speech Correction—Psychological	2 units
Speech 435Z—Advanced Speech Correction—Organic	2 units
Speech 437—Speech Problems in Cerebral Palsy	3 units
Speech 439Y—Clinical Practice in Speech Correction	2 units
Speech 398—Work-Study Assignments and Reports	1 unit
Education 420—Speech Reading	2 units

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* Sp. 150 and Engl. 150 in either order make a sequence; Lang. Arts 150A and B make a separate sequence. Lang. Arts 150A *or* B may *not* be combined with Engl. 150 or Sp. 150.

Education 427—Hearing and Its Measurement	3 units
Education 428—Speech Audiometry and Aural Rehabilitation	3 units
Audiology 429—Clinical Practice in Aural Rehabilitation	2 units
Psychology 301—Mental Hygiene	2 units
	34 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR SPEECH CORRECTION MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
*Sp. 150—Oral Expr. *or* Lang. Arts 150A	3	Sp. 165—Voice and Diction	2
Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3	*Engl. 150—Written Expr. *or* Lang. Arts 150B	3
Govt. 150—Govt. and Am. Soc.	3	Bio. Sci. 153—Prin. of Bio. *or* Phys. Sci. 151	3
Art 150—Art, Music, Dance	3	Psych. 150—Human Behavior	3
Phys. Educ. 150	1	Phys. Educ. elective	1
Electives	3	Elective	3

SOPHOMORE YEAR

Sp. 160—Publ. Speak.	3	Gen. Educ. Soc. Sci. elective	3
Bio. Sci. 154—Prin. of Bio. *or* Phys. Sci. 152	3	H&S 350—Personal Health	2
Phil. 150—Phil. Ideas	3	Hist. 250—U. S. History	3
Engl. 250—Underst. Lit.	3	Electives	8
Electives	4		

JUNIOR YEAR

Sp. 431—Am. Phonetics	2	Sp. 435Y—Adv. Speech Corr. Psych.	2
Sp. 432—Voice Science	2	Educ. 420—Speech Reading	2
Sp. 434—Intro. to Sp. Corr.	3	Educ. 427—Hearing and Measure.	3
Psych. 301—Mental Hygiene	2	Electives	8
Gen. Educ. elective	3		
Electives	4		

SENIOR YEAR

Educ. 428—Sp. Audio.	3	Sp. 437—Sp. Prob. in Cerebral Palsy	3
Audiology 429—Clinical Prac.	2	Sp. 439Y—Clinical Prac.	2
Gen. Educ. elective	3	Sp. 398—Work-Study	1
Sp. 435Z—Adv. Sp. Corr. Org.	2	Electives	9
Electives	5		

General Secondary Teaching Major

See also pages 140-141 for professional education requirements. A teaching minor in a different teaching field is also required for the general secondary credential. Candidates for the general secondary credential in speech are required to have collegiate courses in each of the following areas: composition, literature, speech, and drama or journalism.

Lower Division

Speech 160—Public Speaking *or* Speech 161—Argumentation	3 units
Speech 170—Analysis of Drama *or* Speech 172—Beginning Stagecraft	3 units

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* Sp. 150 and Engl. 150 in either order make a sequence; Lang. Arts 150A and B make a separate sequence. Lang. Arts 150A *or* B may *not* be combined with Engl. 150 or Sp. 150.

Upper Division

Speech 400—Group Discussion	3 units
Speech 420—Oral Interpretation	3 units
Speech 431—American Phonetics	2 units
Speech 464—High School Dramatics	2 units
Speech 465—High School Speech Arts	2 units
Speech 468—Speech Analysis and Evaluation	3 units
Speech 396W—Play Production *or* Speech 397Y—Forensics	3 units
Speech 443—History of the Theater *or* Speech 467—History of Public Address	3 units
Select *three* courses from the following	8–9 units

Speech 313Y—Theatrical Make-up (2)
Speech 411—Persuasive Speaking (3)
Speech 412Y—Advanced Acting (3)
Speech 432—Voice Science (2)
Speech 434—Introduction to Speech Correction (3)
Speech 440YZ—Principles of Directing (3-3)
Speech 445—Television Techniques (3)
Speech 470—Stage Lighting (3)
Speech 473—Stage Scenery (3)
Speech 479—Stage Costuming (3)
English 405—Linguistic Science and Modern English Grammar (3)
English 417—Interpreting Shakespeare (3)
English 427—Modern American Drama (3)
American Studies 402—Ideas in America (3)

Graduate Year

Six units selected from courses in the Department of Speech and Drama with the approval of the departmental adviser	6 units
	42 units

SUGGESTED COURSE SEQUENCE FOR SPEECH MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
*Sp. 150—Oral Expr. *or*		Sp. 170—Anal. of Drama *or*	
Lang. Arts 150A	3	Sp. 172—Begin. Stagecraft	3
Bio. Sci. 153—Prin. of Bio. *or*		*Engl. 150—Written Expr. *or*	
Phys. Sci. 151	3	Lang. Arts 150B	3
Govt. 150—Govt. & Am. Soc.	3	Bio. Sci. 153—Prin. of Bio. *or*	
Art 150—Art, Music, Dance	3	Phys. Sci. 151	3
Phys. Educ. 150	1	Psych. 150—Human Behavior	3
Elective or Minor	3	Phys. Educ. elective	1
		Elective	2

SOPHOMORE YEAR

Sp. 160—Publ. Speak. *or*		Gen. Educ. Soc. Sci. elective	3
Sp. 161—Argumentation	3	H&S 350—Personal Health	2
Bio. Sci. 154—Prin. of Bio. *or*		Hist. 250—U.S. History	3
Phys. Sci. 152	3	Gen. Educ. elective	3
Phil. 150—Phil. Ideas	3	Minor	5
Engl. 250—Underst. Lit.	3		
Gen. Educ. elective	3		

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* Sp. 150 and Engl. 150 in either order make a sequence; Lang. Arts 150A and B make a separate sequence. Lang. Arts 150A *or* B may *not* be combined with Engl. 150 or Sp. 150.

JUNIOR YEAR

First Semester	*Units*	*Second semester*	*Units*
Sp. 396W—Play Prod. *or*		Sp. 443—Hist. of Theater *or*	
Sp. 397Y—Forensics	3	Sp. 467—Hist. of Publ. Addr.	3
Sp. 400—Group Discussion	3	Educ. 471—Sec. Educ.	5
Sp. 420—Oral Interpr.	3	Educ. 490—Audio-Vis.	2
Sp. 465—High Sch. Sp. Arts	2	Minor	3
Educ. 300—Intro. to Cred. Prog.	N. Cr.	Speech or related electives	3
Educ. 413—Psych. & Soc.	5		

SENIOR YEAR

Sp. 431—Am. Phonetics	2	Sp. 468—Sp. Anal. & Eval.	3
Sp. 464—High Sch. Drama	2	Educ. 493—Methods (Major)	2
Educ. 480—Counsel & Guid.	2	(Minor)	2
Minor	6	Minor	6
Speech or related electives	3	Speech or related electives	3

GRADUATE YEAR

Educ. 442Y—Direct. Teach.	3	Educ. 442Z—Direct. Teach.	3
Educ. 444Y——Problem Sec.	1	Educ. 444Z—Problem Sec.	2
Minor	3	Electives (Recommended: Speech courses in 500 series)	9–10
Electives (Recommended: Speech courses in 500 series)	8–9		

General Secondary Teaching Minor

Lower Division

Speech 160—Public Speaking	3 units
Speech 170—Analysis of Drama *or* Speech 172—Beginning Stagecraft	3 units

Upper Division

Speech 464—High School Dramatics	2 units
Speech 465—High School Speech Arts	2 units
Speech 468—Speech Analysis and Evaluation	3 units
Speech 396W—Play Production *or* Speech 397Y—Forensics	3 units
Speech 400—Group Discussion *or* Speech 473—Stage Scenery	3 units
Select *one* course from the following	2–3 units
Speech 411—Persuasive Speaking (3)	
Speech 412Y—Advanced Acting (3)	
Speech 420—Oral Interpretation (3)	
Speech 431—American Phonetics (2)	
Speech 432—Voice Science (2)	
Speech 440Y—Principles of Directing (3)	
	21–22 units

MASTER OF ARTS DEGREE CURRICULA

Master of Arts Degree in Speech and Drama

1. Prerequisites: Course prerequisites, including at least 20 units of undergraduate work in speech and drama. Formal conference with assigned adviser is required for formulation of the degree program.

2. Area of concentration:
   - Select from the following at least two courses .... 6 units
     - Speech 521—Seminar in Rhetorical Theory (3)
     - Speech 522—Seminar in Argumentation, Discussion, and Debate (3)
     - Speech 567—Studies in American Public Address (3)
     - Speech 560—Speech Education in America (3)
   - Select from the following at least two courses .... 6 units
     - Speech 512—Seminar in Theories of Acting (3)
     - Speech 520—Seminar in Dramatic Arts (3)
     - Speech 530—Studies in Oral Interpretation (3)
     - Speech 573—Seminar in Experimental Theater (3)
   - Select one course from the following .... 3 units
     - Speech 515—Performance (3)
     - Speech 599—Graduate Project (3)
   - With approval of adviser select courses pertinent to the program in the areas of speech, speech correction, drama, communications, or English language .... 9 units
3. Courses offered outside the Department of Speech and Drama approved by adviser .... 6 units
4. Written comprehensive examination for the M.A. in speech and drama. When the examining committee deems it necessary, the final written comprehensive examination may be supplemented with an oral comprehensive examination.

Master of Arts Degree in Speech

1. Prerequisites: Course prerequisites, including at least 20 units of undergraduate work in speech. Formal conference with assigned adviser is required for formulation of the degree program.
2. Area of concentration:
   - Graduate Core Program—
     - Speech 521—Seminar in Rhetorical Theory .... 3 units
     - Speech 522—Seminar in Argumentation, Discussion, and Debate .... 3 units
     - Speech 567—Studies in American Public Address .... 3 units
     - Speech 560—Speech Education in America .... 3 units
   - Minor fields in speech: Candidates must complete at least one course in each of the three areas below. The advanced courses should be selected when the introductory courses have been previously completed.
     - A. Oral Interpretation* .... 3 units
       - Speech 420—Oral Interpretation (3) *or*
       - Speech 530—Studies in Oral Interpretation (3)
     - B. Speech Correction* .... 3-4 units
       - Speech 434—Introduction to Speech Correction (3) *or*
       - Speech 435Y—Advanced Speech Correction, Psychological (2) *and*
       - Speech 435Z—Advanced Speech Correction, Organic (2)
     - C. Drama .... 3 units
       - Speech 443—History of the Theater (3) *or*
       - Speech 520—Seminar in Dramatic Arts (3)
   - Elective in Speech selected with approval of adviser .... 3 units
3. Courses offered outside the Department of Speech and Drama approved by adviser .... 6 units
4. Written comprehensive examination for the M.A. in speech. When the examining committee deems it necessary, the final written comprehensive examination may be supplemented with an oral comprehensive examination.

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* If all courses in these sequences or their equivalents have previously been completed in upper division, appropriate substitutions may be made by the adviser.

Master of Arts Degree in Drama

1. Prerequisites: Course prerequisites, including at least 20 units of undergraduate work in drama, speech, dramatic literature, or communications. Formal conference with assigned adviser is required for formulation of the degree program.
2. Area of Concentration:

Graduate Core Program—	
Speech 512—Seminar in Theories of Acting	3 units
Speech 520—Seminar in Dramatic Arts	3 units
Speech 573—Seminar in Experimental Theater	3 units
Select *one* course from the following	3 units
Speech 515—Performance (3)	
Speech 599—Graduate Project (3)	
*Select at least *two* courses from the following	6 units
Speech 440YZ—Principles of Directing (3-3)	
Speech 442Y—Playwriting (3)	
Speech 443—History of the Theater (3)	
Speech 445—Television Techniques (3)	
*Select at least *two* courses from the following	6 units
Speech 470—Stage Lighting (3)	
Speech 473—Stage Scenery (3)	
Speech 479—Stage Costuming (3)	

3. From courses offered outside the Department of Speech and Drama approved by adviser — 6 units
4. Written comprehensive examination for the M.A. in drama. When the examining committee deems it necessary, the final written comprehensive examination may be supplemented with an oral comprehensive examination.

Master of Arts Degree in Speech Correction and Audiology

The Department of Speech and the Department of Special Education have been authorized to offer a Master of Arts degree in Speech Correction and Audiology. Descriptions, prerequisites, and requirements of the program are available from advisers in Speech Correction and in Audiology.

COURSES OF INSTRUCTION

Lower Division

Speech 101 Parliamentary Practice (1) Fall, Spring

An overview of social and economic organizations, their structure and functions with emphasis upon conducting meetings, functions of the chairman, duties of officers, and techniques of parliamentary law.

150 Oral Expression (3) Fall, Spring (General Education)

Fundamentals of oral expression. Experience in organization, reasoning, delivery and criticism through practical application in individual and group situations.

160 Public Speaking (3) Fall
Preparation, organization, and delivery of practical speeches. Emphasis on audience analysis and speeches for special occasions.

161 Argumentation (3) Spring
Principles of argumentation: Reasoned discourse; methods of logical analysis and reflective thinking. Practical application: Kinds and forms of debate; adaptation of materials to audience situations, argumentative speeches and practice debates on current issues.

162 Acting Fundamentals (3) Fall
Introduction to the basic principles and techniques of acting as an artistic discipline. Performances of laboratory scenes, readings, and exercises.

165 Voice and Diction (2) Fall, Spring
Studies in phonation, articulation, and pronunciation. Special attention to diction for classroom teachers, public speakers, and actors.

170 Analysis of Drama (3) Fall
Introduction to the principles of dramatic art. Consideration of the elements of drama, dramatic structure, types and styles, evaluation and appreciation through study and workshop presentation of representative plays.

172 Beginning Stagecraft (3) Spring
Introduction to technical theater practices through lectures, demonstrations, and workshop experience. Basic elements of theater crafts with emphasis on design, construction, and painting.

195W-X-Y-Z Stage Crew Activity (1-1-1-1)* Fall, Spring
Active participation in production crew work in college-sponsored dramatic presentations.

196W-X-Y-Z Rehearsal and Performance (1-1-1-1)* Fall, Spring
Active participation in college-sponsored dramatic activities.

197W-X-Y-Z Forensic Activity (1-1-1-1)* Fall, Spring
Participation in intercollegiate forensic activities.

Upper Division

SPECIAL STUDIES

313Y-Z Theatrical Make-up (2) Fall, Spring
Theory and practice in theatrical makeup for stage, television and cinema. Emphasis on development of individual skill in techniques of character analysis, application in pigment, plastic, hair makeup, selection and use of makeup equipment.

396W-X-Y-Z Play Production (3-3-3-3) Fall, Spring
Prerequisite: Consent of instructor. Participation under faculty supervision in the planning, preparation, and presentation of college-spon-

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* A maximum of four units of Speech 195, 196, and 197 may be applied toward graduation requirement.

sored dramatic presentations; emphasis on acting and assistant director assignments.

397Y-Z Forensics (3-3) Fall, Spring
Prerequisite: Consent of instructor. Participation under faculty supervision in the planning, preparation, and presentation of college-sponsored speech and forensic activities; emphasis on preparation for and participation in tournament events.

398 Work-Study Assignments and Reports (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

Oral Skills

400 Group Discussion (3) Fall, Spring
The role of group discussion in a democratic society. Principles and methods of group discussion in problem solving and learning situations. Development of individual skills in discussion preparation, participation, and leadership through practical application.

411 Persuasive Speaking (3) Fall
Prerequisite: Consent of instructor. Methods of persuasion with emphasis upon ethical, logical, and pathetic proofs.

412Y-Z Advanced Acting (3-3) Fall, Spring
Prerequisite: One lower division course in acting fundamentals or equivalent. Gesture, movement, timing, and pointing; problems of characterization; styles of acting and characteristics of acting in various dramatic media. Presentation of scenes from plays of various types. Emphasis on improvisations as a method of developing acting talent. May be taken in any sequence.

420 Oral Interpretation (3) Fall, Spring
Theory of oral interpretation; readings in poetry and prose.

Speech Science and Correction

431 American Phonetics (2) Fall, Spring
Systematic analysis of the sounds of speech and the use of the International Phonetic Alphabet. Application of phonetic principles to articulation, to the teaching of speech, and to speech correction.

432 Voice Science (2) Spring
The production of speech, its acoustic characteristics, and the body structures and their functions involved in speech processes.

434 Introduction to Speech Correction (3) Fall, Spring
Characteristics, causes, and treatment of speech defects. Designed to acquaint the special education teacher with common speech problems of children and to serve as an introductory course for speech therapists.

435Y Advanced Speech Correction—Psychological (2) Fall
Prerequisite: Speech 434 or equivalent. Theories, diagnosis and treatment of speech disorders originating in or maintained by emotional factors including delayed speech, stuttering, severe functional articulation problems, etc.

435Z Advanced Speech Correction—Organic (2) Spring
Prerequisite: Speech 434 or equivalent. Theories, diagnosis and treatment of those speech disorders resulting from or occurring concommitantly with organic abnormalities of the physical mechanism. Areas which will receive special attention include structural oral deformities, cleft lip and palate, cerebral palsy and aphasia.

437 Speech Problems in Cerebral Palsy (3) Spring
Prerequisite: Speech 434 or equivalent. Speech problems associated with cerebral palsy. Normal function of the speech mechanism is contrasted with that of the orthopedically handicapped in consideration of disturbances of respiration, hearing, articulation, language development, and cerebration. Diagnostic and therapeutic techniques presented.

438Y-Z Group Techniques in Speech Correction (2-2) Fall, Spring
Prerequisite: Speech 434 or 461 or equivalent. Observation and supervised experience in group therapy with speech-handicapped children including the preparation of and utilization of materials suitable for group speech correction in the public schools.

439Y-Z Clinical Practice in Speech Correction (2-2) Fall, Spring
Prerequisites: Speech 435Y and 435Z, or equivalents. Observation and supervised clinical experience in individual diagnostic and therapeutic procedures with the more seriously speech-handicapped children and adults.

Dramatic Arts

440Y-Z Principles of Directing (3-3) Fall, Spring
Prerequisite: A course in acting. Lectures and practice in problems of stage directing.

442Y-Z Playwriting (3) Fall
Prerequisites: At least one upper division course in dramatic literature and permission of the instructor. Workshop in the planning, preparation, and writing of manuscripts for stage, screen, and television. Emphasizes handling of dramatic materials, play structure, characterization, and appropriate dialogue. Reading and experimental production of superior manuscripts.

443 History of the Theater (3) Fall
Development of the theater from its prehistoric beginnings to the present with emphasis on the most productive periods.

445 Television Techniques (3) Spring
Survey of current trends in television techniques, programming, and production through lectures, reports, field trips, and selected viewing.

Speech Education

460 Speech and Dramatic Activities in Elementary Schools (3) Fall, Spring

Theory and techniques of creative dramatics, puppetry, choric speaking, and storytelling. Designed primarily for kindergarten, primary, and elementary teachers. Also valuable to recreation workers.

461 Speech Problems in the Classroom (3) Fall, Spring

Identification of common deviations from the normal pattern of development and function of oral language in elementary schoolchildren. Techniques appropriate for speech improvement and for establishing proper speech habits. Designed for kindergarten, primary, and elementary teachers; not for special education or preprofessional therapy majors. (Replaces Speech 434 in composite minor program.)

464 High School Dramatics (2) Fall, Spring

Theory and techniques of dramatic production in secondary schools. Requires attendance at typical high school dramatic presentations. Not a methods course; emphasis on subject field skills.

465 High School Speech Arts (2) Fall, Spring

Techniques of speech in the secondary school. Survey of textbooks and materials suitable for secondary schools. Includes public speaking, oral interpretation, discussion, debate, and other speech activities. Requires attendance at high school speech arts activities. Not a methods course; emphasis on subject field skills.

467 History of Public Address (3) Spring

Prerequisite: One upper division course in speech. Historical treatment of great speakers and their speeches from the Greek period to the present; lectures, discussions, readings.

468 Speech Analysis and Evaluation (3) Fall

Prerequisite: A course in public speaking. Approaches to rhetorical analysis and evaluation of speeches. Methods of classroom application.

Technical Theater

470 Stage Lighting (3) Spring

Prerequisite: Lower division course in electricity, stage lighting, or consent of instructor. Theory and practice of stage lighting for plays, pageants, operas, dance, television, and other dramatic productions for professional, educational, and community presentations. Designed to serve speech, drama, music, industrial arts, and recreation majors. Practical experience through participation in college-sponsored productions.

473 Stage Scenery (3) Fall

Prerequisite: Lower division course in stagecraft or consent of instructor. Theory and practice of set design; advanced techniques in scenery construction and production organization. Designed to serve speech, drama, music, industrial arts, art, and recreation majors. Practical experience through participation in college-sponsored productions.

479 Stage Costuming (3) Fall
Theory and practice in constructing costumes for plays, operas, pageants, the dance, television, and other dramatic productions for professional, educational, and community presentations. Practical experience in execution of costumes for college-sponsored productions.

INDEPENDENT STUDIES

499 Independent Study (1-3) Fall, Spring
Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Graduate standing is prerequisite to registration in the following courses:

512 Seminar in Theories of Acting (3) Fall
Prerequisite: At least one upper division course in acting or directing. Studies in the major theories of acting from Diderot to the present; special emphasis on origins, aesthetics, and psychology of acting.

515 Performance (3) Spring
Prerequisite: An undergraduate course in speech or drama, or consent of instructor. Intensive study of the organization, presentation, and theory of the use of significant themes and ideas in the professional lecture and lecture recital. Planning, practice, and presentation of monodramas, oral readings, book reviews, and speeches for use in classroom and community.

520 Seminar in Dramatic Arts (3) Fall
Prerequisite: At least one upper division course in dramatic theory or dramatic literature. Backgrounds in theatrical art; analysis of the aesthetic principles and content of the theater; selected problems in the philosophy of dramatic art.

521 Seminar in Rhetorical Theory (3) Spring
Selected studies in the philosophy of speech rhetoric and the influence of rhetoric on historic and contemporary movements.

522 Seminar in Argumentation, Discussion, and Debate (3) Fall
Prerequisite: At least one upper division course in public address. Analysis of significant literature, major trends, and theories of argumentation, discussion, and debate, and an intensive study of the relationship of these areas to each other.

530 Studies in Oral Interpretation (3) Spring

Prerequisite: Speech 420 or consent of instructor. Analysis of the main theories of the art of interpretation with special emphasis on their relation to contemporary theory and practice.

535 Seminar in Speech Disorders (3) Fall

Prerequisites: Speech 435YZ. Intensive analysis of vocal and articulatory problems associated with structural conditions such as cleft palate, malocclusion and laryngeal pathologies. Special emphasis on new approaches to examination, diagnosis and therapeutical procedures.

536Y-Z Advanced Clinical Practice in Speech Correction (2-2) Fall, Spring

Prerequisite: Speech 439. Advanced clinical procedures in diagnosis and therapy with speech handicapped children and adults.

560 Speech Education in America (3) Spring

Major trends in the development of speech education in America; the evolution of the speech curriculum; recent developments in pedagogical theory and method.

567 Studies in American Public Address (3) Fall

Prerequisite: Speech 467. Examination and analysis of speeches and debates about selected major issues in American affairs. Some attention given to British speakers who affected the course of American affairs.

573 Seminar in Experimental Theater (3) Spring

Prerequisites: At least two upper division courses in dramatic literature and/or dramatic theory. The influential personalities, masterpieces of dramatic literature, and significant theatrical movements in America and Europe which have contributed to experimentation in the dramatic arts of modern times.

599 Graduate Project (3) Fall, Spring

Prerequisites: Admission to candidacy for master's degree; consent of instructor. The investigation and written presentation of a selected problem in speech or drama.

ZOOLOGY

(In the Division of Science and Mathematics)

STAFF: Lowrie (Department Head), Bair, Hovanitz, LaDochy, Ross, Vance, Welsh.

BACHELOR'S DEGREE CURRICULUM

Major in Zoology

The major program in zoology is designed to provide a broad training in animal biology. Graduation with such a major in zoology qualifiies a student for (a) graduate study; (b) entrance into medical and dental schools (if additional work in chemistry and physics is elected); (c) employment in federal and state civil service, particularly in fish and game work and in park service; (d) employment in certain types of industrial laboratories such as the pharmaceutical houses; (e) positions as technicians in university research projects; (f) natural history museum work.

Lower Division

Zoology 100—General Zoology	5 units
Botany 100—General Botany	5 units
Chemistry 101—General Chemistry	5 units
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units
Mathematics 100—Basic Mathematical Analysis	4 units

Upper Division

Biological Science 410—Genetics	3 units
Biological Science 460—General Ecology	4 units
Zoology 440—Invertebrate Zoology	4 units
Zoology 423—Comparative Anatomy *or*	
Zoology 424—Embryology	4 units
Zoology 430—Animal Physiology	4 units
Chemistry 401A—Organic Chemistry	3 units
Three courses from the following (selected with the approval of an adviser)	9 units

Biological Science 411—Evolution (3)
Biological Science 420—Histological Methods (3)
Biological Science 421—Cytology (4)
Conservation 461—Conservation of Wildlife (3)
Botany 440—Plant Classification (4)
Microbiology 200—General Microbiology (5)
Zoology 422—Animal Histology (4)
Zoology 423—Comparative Anatomy (4)
Zoology 424—Embryology (4)
Zoology 441—General Entomology (4)
Zoology 442—Medical Entomology (3)
Zoology 443—Cold-blooded Vertebrates (3)
Zoology 444, 445—Birds of California (2-2)
Zoology 446—Mammalogy (4)
Zoology 447—Marine Zoology (3)
Zoology 462, 463—Parasitology, Animal Parasitology (3-1)

58 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR ZOOLOGY MAJOR

FRESHMAN YEAR

First semester	*Units*	*Second semester*	*Units*
Zool. 100—Gen. Zoology	5	Bot. 100—Gen. Botany	5
Chem. 101—Gen. Chem.	5	Math. 100—Basic Math. Anal.	4
†Engl. 150—Written Expr. *or*		†Sp. 150—Oral Expr. *or*	
Lang. Arts 150A	3	Lang. Arts 150B	3
Govt. 150—Govt. & Am. Soc.	3	Art 150—Art, Music, Dance	3
		Phys. Educ. 150	1

SOPHOMORE YEAR

First semester	*Units*	*Second semester*	*Units*
Physics 101—Physics I	4	Physics 102—Physics II	4
Chem. 401A—Organic Chem.	3	Hist. 250—U. S. History	3
Phil. 150—Phil. Ideas	3	Engl. 250—Underst. Lit.	3
Phys. Educ. elective	1	Psych. 150—Human Behavior	3
Gen. Educ. Soc. Sci. elective	3	Elective	3
Elective	2		

JUNIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Zool. 423—Comp. Anat. *or*		Zool. 440—Invertebrate	4
Zool. 424—Mammal. Embry.	4	*Zool. electives	6–8
*Zool. electives	3–4	Electives	3–5
H&S 350—Personal Health	2		
Electives	5		

SENIOR YEAR

First semester	*Units*	*Second semester*	*Units*
Bio. Sci. 410—Genetics	3	Bio. Sci. 460—Gen. Ecol.	4
Gen. Educ. elective	3	Zool. 430—Animal Physio.	4
Electives	9	Gen. Educ. elective	3
		Electives	4

COURSES OF INSTRUCTION

100 General Zoology (5)

Introduction to the study of zoology. Basic concepts in zoology are considered in an integrated manner and groundwork is laid for future study in zoological sciences. Laboratory experience with major techniques common to biological sciences. Three hours lecture; six hours laboratory.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

422 Animal Histology (4) Spring

Prerequisites: Zoology 100. Microscopic characteristics of tissues and organs. Mammalian tissue emphasized; amphibian tissue used when its simplicity will aid in understanding. Lecture two hours; laboratory six hours.

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* Selected with the approval of an adviser.

† See "Note" on page 55.

423 Comparative Anatomy (4) Fall

Prerequisite: Zoology 100. Evolution of vertebrate structure and organ systems including chief environmental adaptations. Laboratory limited to the comparative morphology of vertebrate types, emphasizing mammalian anatomy. Lecture two hours; laboratory six hours.

424 Mammalian Embryology (4) Spring

Prerequisite: Zoology 100. Survey of the development of the mammal from egg to foetus; laboratory studies of chick and pig embryos. Histogenesis and organogenesis, and physiology of reproductive tract. Lecture two hours; laboratory six hours.

430 Animal Physiology (4) Fall, Spring

Prerequisites: Zoology 100, Chemistry 101 (Physics is desirable). Study of the function of animal systems in vertebrates. Emphasis on control and interrelations of different organ systems. Uses and manipulation of basic equipment in physiology laboratory. Lecture two hours; laboratory six hours.

440 Invertebrate Zoology (4) Spring

Prerequisites: Zoology 100. Characteristics and natural history of the invertebrates. The major groups of animals without backbones arranged in an evolutionary order from single-celled animals to primitive chordates. Emphasizes forms characteristically found in this region. Lecture two hours; laboratory six hours.

441 General Entomology (4) Spring

Prerequisites: Zoology 100, Zoology 440 and Bot. 440 recommended. Study of the anatomy, physiology, ecology, habits, and distribution of insects; emphasis on species of California and the West. Principles of entomology stressed as well as giving an appreciation of esthetics and economic importance. Techniques for observation, capture, preservation, and display of insects. Lecture two hours; laboratory six hours; several Saturday and one overnight field trips.

442 Medical Entomology (3) Spring

Prerequisite: Zoology 100. The role of arthropods, especially the insects, as transmitters of human animal diseases. Stresses classification, structure, life histories, and practical applications. Lecture two hours; laboratory three hours.

443 Cold-blooded Vertebrates (3) Spring

Prerequisite: Zoology 100. Biology, classification, and ecology of California fishes, amphibians, and reptiles. Lecture two hours; laboratory or field trips three hours.

444 Birds of California (2) Fall

Acquaintance with Pacific Coast and desert birds by specimens, lecture, and field study. Classification, structure, habits, field recognition, ecology; migration and distribution. Lecture one hour; laboratory or fieldwork three hours.

445 Birds of California (2) Spring

Acquaintance with Pacific Coast and desert birds by specimens, lecture, and field study. Classification, structure, habits, field recognition, ecology; nesting and bird songs. Lecture one hour; laboratory or fieldwork three hours.

446 Mammalogy (4) Fall

Prerequisite: Zoology 100. Natural history, identification and classification of mammals together with field techniques. Emphasis on mammals of western states. Lecture two hours; laboratory or fieldwork six hours.

447 Marine Zoology (3) Fall

Prerequisite: Zoology 100. Study of the sea as a life environment. Field and laboratory familiarization with local marine animals and their habitats. Lecture two hours; laboratory two hours plus field trips.

462 Parasitology (3) Fall, Spring

Prerequisite: Zoology 100. Parasitic protozoa and helminths of man; emphasis on classification and identification. Life cycles of representative forms. Lecture two hours; laboratory three hours. (Formerly Microbiology 330.)

463 Animal Parasitology (1) Fall, Spring

To accompany and supplement Zoology 462. Emphasizes the broader aspects of parasitism shown by study of parasitic relationships in many animal groups.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSE

560 Animal Ecology (2) Spring, Fall

Prerequisites: Bachelor degree in botany, zoology or biological science, including general ecology and preferably general entomology and plant classification, or consent of instructor. Advanced studies in the ecological relationships of animals with emphasis on synecology. Lecture one hour; laboratory three hours.

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